

DUCTION

AUGUST 1957

## BASIC MONTHLY

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DETROIT

MATERIALS HANDLING AND PACKAGING METHODS

This Issue:  
Special Report: When You Handle  
Overhead . . . You Can Put Your  
Ceilings To Work . . . 49  
Do's & Don'ts for Fork Truck  
Operators . . . 58  
Lubricating Overhead Conveyors 64  
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FLOW BASIC

FLOW QUARTERLY

130,000 Plant Coverage

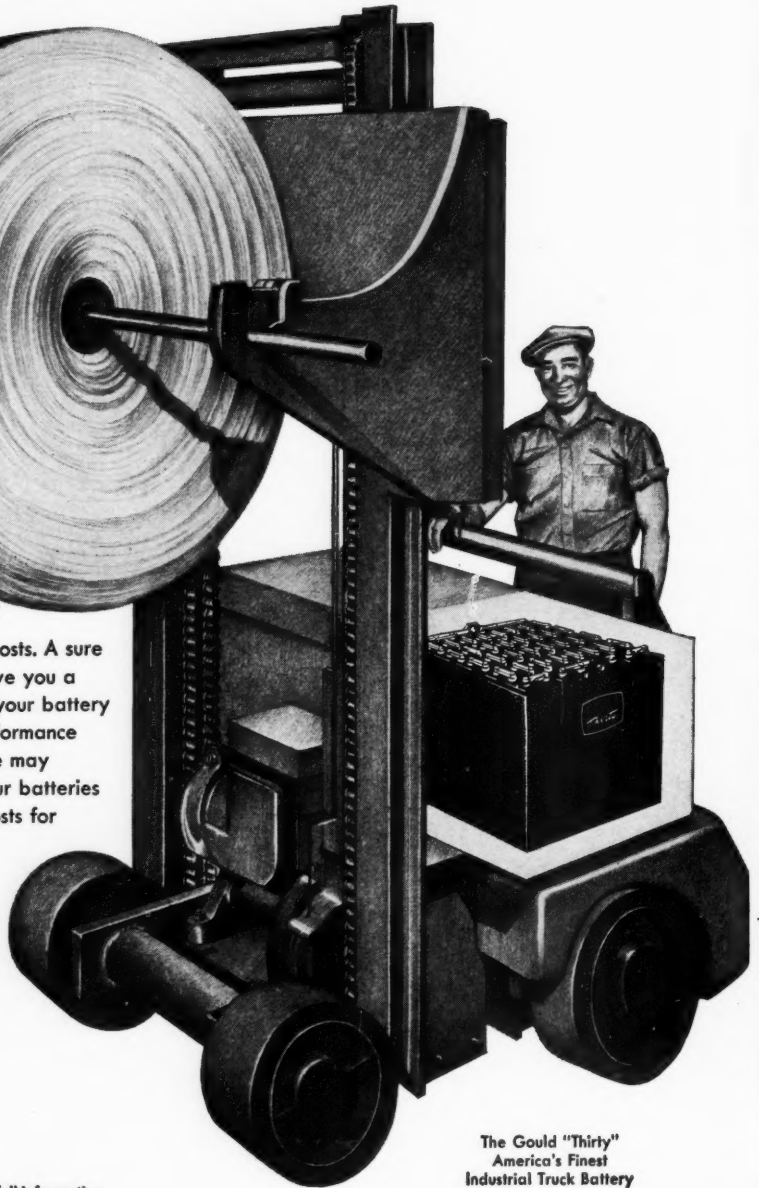
# SYSTEMIZE BATTERY CARE...

## Get a Good Run for Your Money!

The longer your trucks remain in service, the lower you cut your handling costs. A sure way to make every one of your trucks give you a good run for your money is to systemize your battery maintenance by using the Gould Plus-Performance Plan. This free system of battery insurance may be able to increase the service life of your batteries as much as 50%! It's lowering handling costs for others . . . let it lower them for you.



If you want full information on how this plan can lower your handling costs, write Gould Battery Information Headquarters.



The Gould "Thirty"  
America's Finest  
Industrial Truck Battery

# GOULD

## Industrial Batteries

GOULD-NATIONAL BATTERIES, INC., TRENTON 7, N. J.

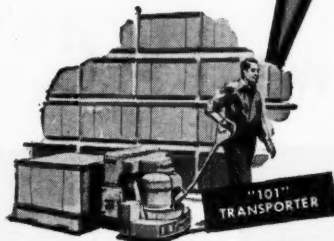
Always Use Gould-National Automobile and Truck Batteries

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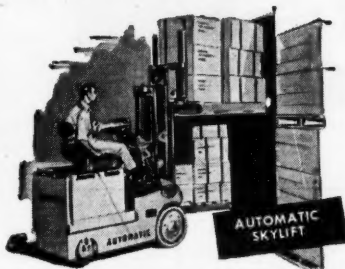


# Let the Figures Prove How Much More You Save With "Keyed-For-the-Job" Automatic Trucks

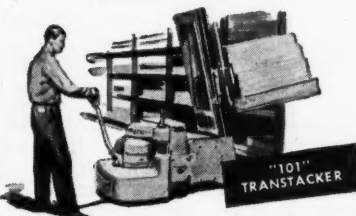
There's only one RIGHT truck for each material handling job... and Automatic has the experience and know how that saves you money with trucks "Keyed-For-the-Job"



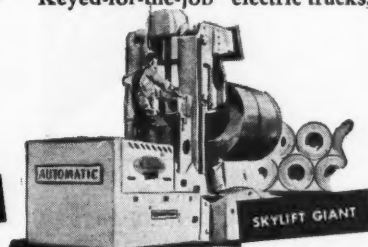
Moves tons of your product at the touch of a button... raise load to moving height in seconds... works all day for as little as pennies.



Lifts, moves and tiers material 132 inches from floor to top of fork. Drives and operates like an automobile—speeds up operation—reduces operator fatigue.



Ability to maneuver in crowded quarters makes this model ideal for operation in narrow aisles, and in areas where floor or elevator capacities are limited.



Designed for heavy duty handling requirements, the Skylift Giant is available in capacities ranging from 20,000 pounds to 80,000 pounds.

## Automatic

ELECTRIC TRUCKS

Trade Mark  
Registered

Lighten  
LIFE'S LOADS

Automatic® 141 West 87th Street, Dept. M-2  
Chicago 20, Illinois

Send me facts on Automatic "Keyed-for-the-Job" Electric Trucks.  
☐ Have an Automatic representative call and give me a preliminary estimate of material handling savings using Automatics in my plant.

Company Name.....

By..... Title.....

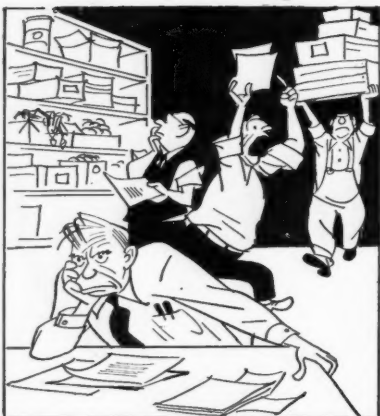
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City..... Zone..... State.....

WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC INDUSTRIAL TRUCKS

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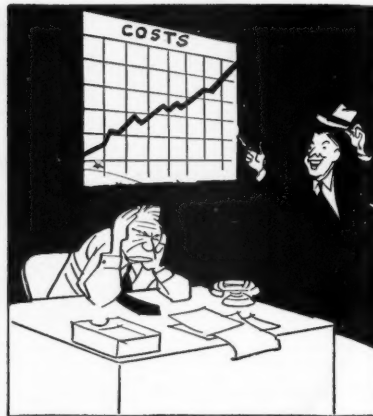
# this poor man ran a B.C.\* mill



\*BC means before Cargotainers . . . this poor chap never heard of them. His storage was haphazard; his shipping was slow; his inventories were seldom made with any accuracy.

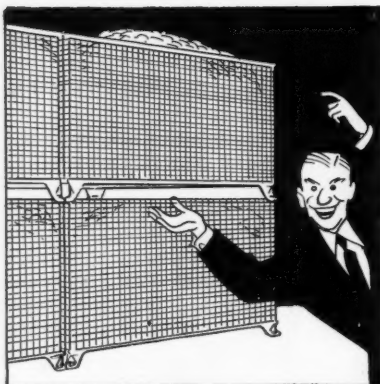


To make matters worse, the floor space of his mill was so cluttered up with finished and semi-finished merchandise that operating efficiency and safety were at low ebb.



Needless to say, operating costs were higher than at any time since the founder grew a beard, and they were still going up. Just in time a Cargotainer salesman came to call.

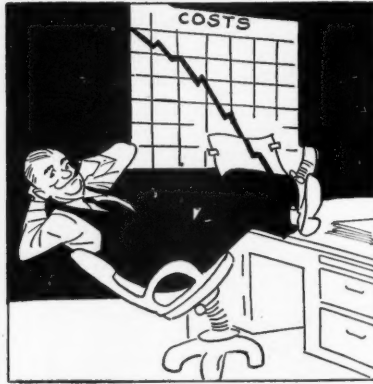
# then he saw the light and went A.C.\*



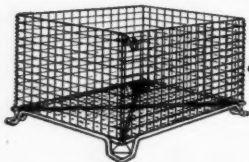
\*AC—"after Cargotainers"—things were very much different. Even the heaviest of his products were visibly stored, tier on tier, in sturdy open-mesh Cargotainers. He never knew he had so much floor area.



Inventory check was now easy, and all materials and parts remained right in their rugged collapsible Cargotainers as they moved to assembly line and shipment. Safety records went up and costs down.



Moral: If by chance you are BC, you can save by going AC. Without obligation, our Materials Handling Engineers will show you how. Write today. Dept. F, Pittsburgh Steel Products Co., Grant Bldg., Pittsburgh 30, Pa.



## CARGOTAINERS

by Pittsburgh Steel Products Company  
A Subsidiary of Pittsburgh Steel Company

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AUGUST, 1952 • FLOW



**FLOW** is not the official publication of any group, society or other special interest: its editorial pages are unbiased and undominated.

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VOL. 7, NO. 11

AUGUST, 1952

**COVER PHOTO**—Bridge cranes stack large diameter welded steel line-pipe and oil well casing in neat piles at the A. O. Smith Corp., Milwaukee. Shown here is the storage yard near the pipe plant. For more information on handling with overhead equipment, see "Put Your Ceilings To Work" beginning on p. 49.

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FLOW is indexed regularly by Engineering Index, Inc.

# "With RECTOX® I just twist a dial..."

***Sure makes charging easier, quicker!"***



All done with dials now! No taps to change! Just set the dials for the type battery being serviced and the charging rate desired . . . Rectox does the rest. It's a completely automatic, fuss-free, timesaving operation that anyone can perform! A few more facts:

- ★ Can be moved easily to where greatest need exists.
- ★ Combination, Rectox units charge lead-acid or nickel-alkaline-type batteries.
- ★ No energy-wasting resistor . . . no moving parts. Entire unit has heavy industrial construction.

**MORE DATA?** Ask your Westinghouse representative for a copy of DB-19-040, or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-21680

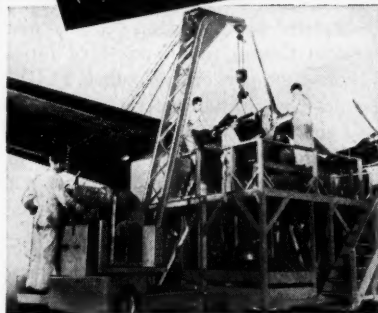


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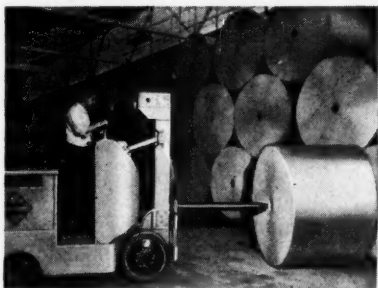
AUGUST, 1952 • FLOW



# TEN TRICKS *with* TRUCKS



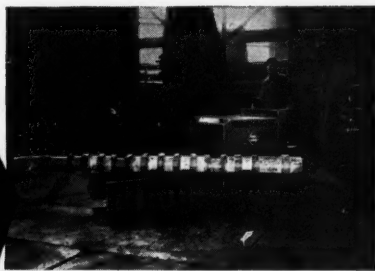
**1.** E-P crane lowers bomber engine into place. Twice as fast as previous method, with less labor.



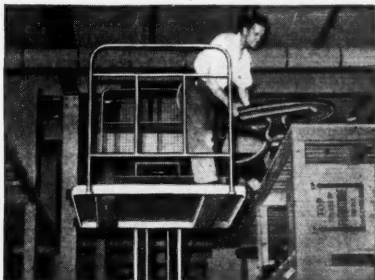
**2.** E-P fork truck picks up rolls on ram—even high tiered rolls—with but 1/4" difference in size of ram and hole.



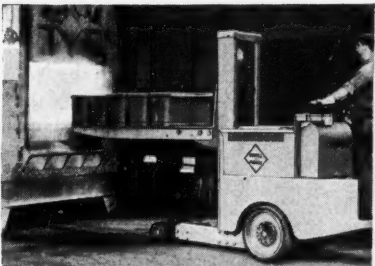
**3.** High stacking huge tires with Elwell-Parker fork truck—a skillful operation.



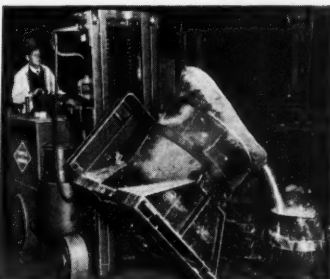
**4.** Forged crankshaft, still at luminous heat, safely handled on skid by Elwell-Parker low lift truck.



**5.** Remote control switch enables operator to use fork (with safety steel platform) as elevator. This saves aisle space.



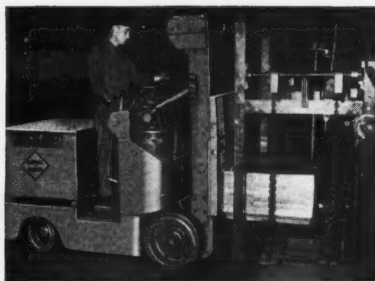
**6.** Platform of this Elwell-Parker enters right into annealing oven to deposit or remove loads.



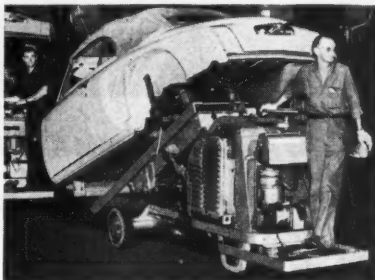
**7.** E-P Rotary Device permits molten metal to be poured with ease and safety.



NEW General Catalog describes E-P line in detail. Send for it now.




**8.** Specially engineered E-P attachment makes this amputee driver "as competent as any two-banded driver" spotting load of tin plate on movable base.



**9.** Trucks carry auto bodies, also upend and store them vertically, to get 3 times as many in same floor space.



**10.** Special E-P device retrieves pallet when load is deposited.

There's no end to the versatility of Elwell-Parkers. One user said, "We have done everything but eat with them!" From Elwell-Parker's vast reservoir of experience—gained during 45 years' specialization in power trucks—industry is drawing a wealth of ingenious handling ideas. You can profit too. Ask your resourceful  man about applying trucks to unusual operations in your plant. The Elwell-Parker Electric Co., 4238 St. Clair Avenue, Cleveland 3, Ohio.

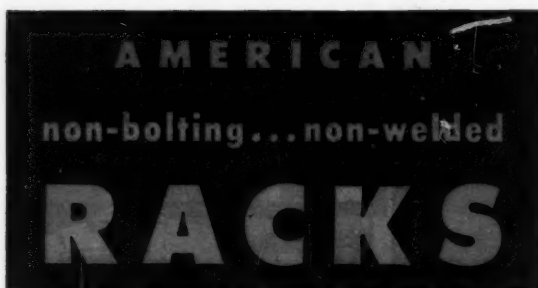
## ELWELL-PARKER

### POWER INDUSTRIAL TRUCKS

Established 1893

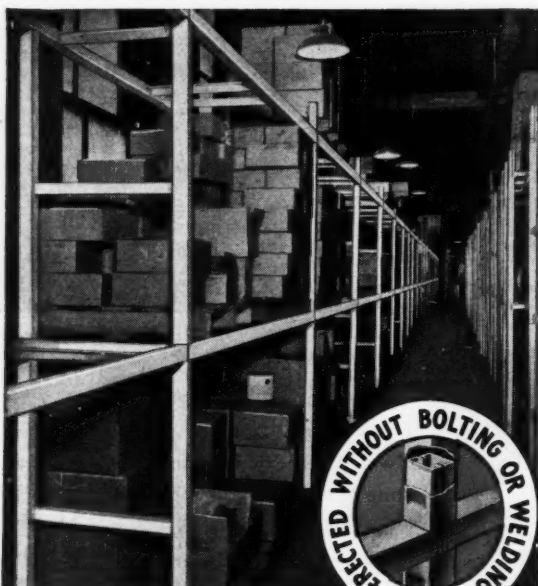
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**from coast to coast  
business acclaims**



**the ideal racks to fit  
every storage need**

**here's another  
American Rack installation**



Acme Quality Paints, Inc.  
Detroit, Michigan

**Send for Catalog**



**5963 Linsdale • Detroit 4, Michigan**

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## HIGHLIGHTS OF THE MONTH'S NEWS

Many of you remember FLOW'S November issue—the special issue on “Material Handling For Wholesalers”. This edition was produced with the cooperation of The National Association Of Wholesalers.

Another project completed by this group recently was a Wholesale Management Course which was held for a two-week period in June. As a part of this course, FLOW was asked to deliver material on Material Handling as it applied to wholesaling and warehousing operations. Much of the material available was re-evaluated in terms of individuals' actual operating problems; new material not contained in this issue was also presented.

Some of the other subjects covered in the course: Selection of Salesmen; Controlling Wholesalers' Turnover; Coordinating Buying and Selling; Principles of Work Simplification; Labor Relations.

Both the NAW and the personnel of Ohio State University (where the course was held) are to be congratulated on an outstanding program which was of tremendous aid to those in attendance.

Reprints of major articles are still available to those interested. You can obtain, free of charge:

- (1) “How To Select The Correct Portable Bridge Plate.”
- (2) “Floor Load Capacity And Its Relation To Industrial Power Trucks.”
- (3) “Two-Way Radio Triples Truck Load Hours.”
- (4) “The High Cost Of Lifting” (interesting facts on the cost of manual handling).
- (5) “How To Sell Management On Material Handling.”
- (6) “How Your Tires Can Last Longer”.
- (7) “15 Ways To Ship Your Products”.
- (8) “The Material Handling Distributor Grows Up.”

If these reprints can be of help to you let us know and we'll send copies on to you promptly.

Our faces are red. In the Fried Steel Equipment Mfg. Corp ad that appeared in our June issue, there was a statement that said the Fried Stripveyor can pay for itself in as little as 1000 working days. This should have read “100 working days.” We're sorry for this unfortunate error.

**Look!**



# THE NEW BAKER TYPE FS

**gives you the most material handling  
you can get for your money in a  
2000 POUND FORK TRUCK**

## Here's Why:

### ► It's BUILT to take PUNISHMENT!

The FS is not a light-duty truck. All-steel welded box-type frame; powerful, cool-running Baker-built motors; efficient Baker worm-drive power axle; dynamic-braking, 2-drum, 5-speed, NO Plug controller; shock-absorbing, rubber-mounted

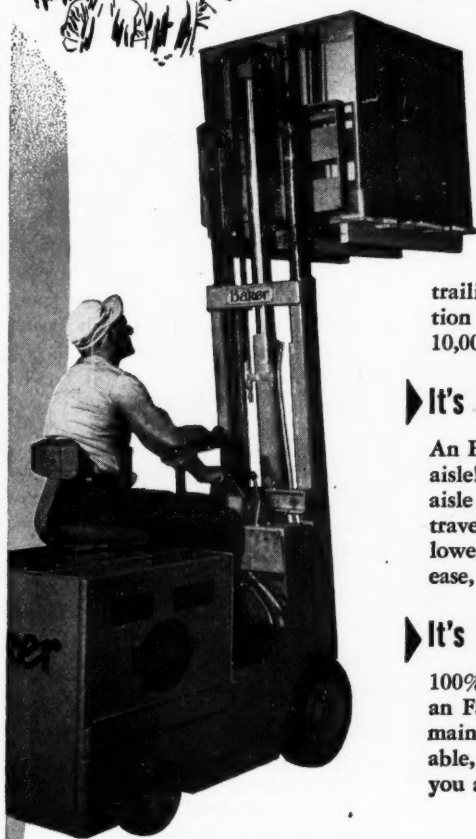
trailing axle—all components are of the same basic construction as in our heavy-duty equipment for capacities up to 10,000 pounds.

### ► It's the most MANEUVERABLE Truck in its class!

An FS with 36-inch forks can make a "U" turn in an 8½-foot aisle! It can stack a 48-inch load at right angles to a 10-foot aisle without sacrificing stability. It's fast—in acceleration and travel—yet smooth as silk. Starting, stopping, reversing, lifting, lowering—all operator functions are engineered for greatest ease, speed and safety.

### ► It's ECONOMICAL!

100% functional design means that every dollar you invest in an FS goes to work for you. You save on operating and on maintenance costs. But its greatest value to you is its dependable, continuous service—*always on the job!* By any standard you apply, the FS is the best buy in its class.



All the features engineered into the outstanding Baker Type FS, 2000-pound Fork Truck are described in an illustrated 8-page specification bulletin. Use this coupon to get your copy.

# Baker

## INDUSTRIAL TRUCKS

**The Baker-Raulang Company**  
1219 West 80th Street • Cleveland 2, Ohio

☐ Please send me Bulletin 1327 describing the Baker Type FS Fork Truck, 2000-pound capacity.

☐ I am also interested in \_\_\_\_\_ pound capacity trucks.

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Circle No. 7 on Reader Service Card for more information



# A "regular" busybody

## AROUND YOUR PLANT

### Allis-Chalmers HD-5G

1 and 2 cu. yd. buckets. 40 drawbar hp. Dumping Height — 9 ft. 1/4 in. — other models with buckets to 7 cu. yd. and up to 175 net engine hp.

#### HANDLES MATERIALS — indoors or out.

Scoops up and carries a full cubic yard at a pass — two yards with bucket for light materials such as coal. Only a crawler tractor gives you the traction, power and flotation for working under any conditions. And this A-C crawler gives you an extra, fast reverse to increase output, plus 1,000-hour lubrication of truck wheels to save you 30 minutes' greasing time every day.

#### STORES COAL, compacts and reclaims it.

This flexible unit builds stockpiles in any available space. Spreads and packs coal in thin, horizontal layers to eliminate spontaneous combustion. As coal is needed, the HD-5G loads from stockpile to trucks. On short hauls, it dozes or carries coal direct to plant.

#### CLEANS UP WASTE — loads or carries it.

Out in the yard, this busy tractor cleans up and loads industrial waste, excavates, trenches and backfills on new construction, spots cars, clears snow... handles many other jobs winter and summer.

Interchangeable attachments for the HD-5G include: Special buckets — up to 2 yd. ... Lift Fork (below) for handling palletized loads... Crane Hooks for heavy lifting... Bulldozers for any excavating... Trench Hoe for footings, pipe, other trenching



Find out how Allis-Chalmers Tractor and Tracto-Shovels can improve material handling around your plant — send coupon for information or demonstration.

**ALLIS-CHALMERS**  
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.

ALLIS-CHALMERS TRACTOR DIV., Dept. MMH  
Milwaukee 1, Wisconsin

I'm interested in: ☐ receiving literature on  
Allis-Chalmers Tractors and Tracto-Shovels.  
☐ seeing this equipment working.

Name .....

Company .....

Address .....

City ..... State .....

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## LETTERS to the editors

### To FLOW:

Referring to the inquiry of Macquarie Stevedoring Co. in your May issue asking for information relative to the packaging or strapping of steel bolts 1" and over in diameter and 4' to 6' in length: We would suggest that the steel bolts be stowed in a tomming fashion with one floor of bolts running fore and aft and the next floor running athwart ship; all to be stowed on a wooden throw-away pallet with three 2x4 bearers; the quantity of bolts to be approximately 3000 pounds in weight per package and strapped with 3/4" steel strapping or something in lieu thereof to hold the package in shape. The nuts and washers we suggest be put in second hand wooden nail kegs.

G. M. Antell  
John W. McGrath Corp.

*Our thanks to Reader Antell for his suggestion, and we hope it helps solve the problem posed by Macquarie Stevedoring Co.*

### To FLOW:

We are interested in obtaining information on palletizing passenger car tires for use with fork lift trucks. If you have any information regarding such an operation, we would appreciate having this reference.

S. Roberts  
S. Riekes and Sons

*We have furnished Reader Roberts with tearsheets of a story on handling tires which appeared in the September, 1951, issue of FLOW.*

### To FLOW:

We are planning a direct mail campaign and find that our mailing list



# Meet every need CUT TIRE COSTS

with the  
**COMPLETE**  
Goodyear  
Industrial Tire  
Line



**I**T'S easier to pick the **RIGHT** tire for your industrial trucks from the complete Goodyear line—the tire that cuts your costs *and* meets your particular needs. There's a *complete* choice of tread designs—*complete* choice of types—*complete* choice of sizes. And there's complete assurance in Goodyear's design-for-the-job that it pays to buy and specify Goodyear!

## **FREE** Technical Engineering Advice and Service

To help you solve your particular industrial tire problems, Goodyear maintains a staff of fully qualified technical experts. For their free recommendations, write:  
Industrial Tire Division, Goodyear,  
Akron 16, Ohio.

# GOODYEAR

## INDUSTRIAL TIRES

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# A Packaged Conveyor

## you can erect yourself

Here is a complete overhead, power driven, monorail conveyor for light and medium loads—the MHS Junior Monoveyor.

You make your own layout to meet whatever manufacturing, transportation and storage requirements you have. Order the necessary components and erect it yourself. No lost time—no unnecessary expense.

Write for Bulletin JM-1 for complete details on components and layout.



### Mechanical Handling

*Systems, Inc.*

4620 NANCY AVE. • DETROIT 12, MICH.

Offices in Principal Cities



Circle No. 10 on Reader Service Card for more information

is complete with the exception of the names of manufacturers of belt conveyors. Do you have such a list for sale, or can you tell us where we may procure one?

Mrs. E. C. Harriman  
J. W. Creer Co.

*Probably the best place to get complete lists of belt conveyor manufacturers, and manufacturers of all other types of material handling equipment, is the latest edition of the FLOW DIRECTORY, now available for \$6.50.*

#### To FLOW:

We operate a public warehouse for storage and distribution. We have a large tract of land adjoining our warehouse and we are interested in building a trucking terminal. We would like to plan one that is modern and with all facilities. We would appreciate it if you could inform us as to where we could get information on what is being done in the United States.

Jos. Venis  
Consolidated Warehouses Corp.

*Do any readers have anything to offer on this?*

#### To FLOW:

On page 53 of the February issue we noted your brief on the adjustable sloping shelves for the speeding of warehouse selection as in the case of filling orders. We are quite interested in this type of equipment for use in our Shipping department, and we will greatly appreciate your informing us the names of any manufacturers who handle this type of racking in stock or any manufacturers that you believe can make this type of storage facility for us.

George F. Volzing  
Ayerst, McKenna & Harrison, Ltd.

*Reader Volzing has been sent the information he desires. The unique rack system to which he refers, is similar to shelves being installed in many new super markets for use with groceries. As the order picker selects an item, from a sloping shelf, additional items slide to the selection position. It's time and space saving.*

(Turn to page 133)

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position.

FLOW



***ONE*** always stands out!  
in fork trucks...it's BUDA

## ***DIESEL Powered for economy***

Compare them all...put each through its paces... try them by every fork truck standard you can think of—and we know the new Buda "FT" Series will stand out as the leaders in every test. Deliberately designed "years ahead" to give you up to 50% savings in operating costs, easier maintenance, greater maneuverability and abso-

lute safety...the new Budas are the new standard of fork truck comparison. Powered by Buda-built heavy duty Industrial Type Diesel or gasoline engines proven in millions of hours of operation for economy, less maintenance and longer life. See the new Buda "FT" Series Trucks today. Write for Bulletin 1570. The Buda Company, Harvey, Illinois

FORK TRUCKS CHORE BOYS INDUSTRIAL TRACTORS



THE LINE WITH ALL 3 FOR DIVERSIFIED HANDLING

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# BUDA<sup>BH-44</sup>

\* HERE THEY ARE

The  
NEW and  
IMPROVED  
COMETS!



\* PUSH BUTTON  
CONTROL



\* PENDANT ROPE  
CONTROL

**CM**  
**COMET**  
ELECTRIC  
CHAIN  
HOISTS

Capacities: 1/4 to 2 tons

Plug in on 110 single phase  
or 220-440 volt power lines

\* CM COMET Electric Chain Hoists are now available in two models... Push Button Control or Pendant Rope Control. Designed for production line applications. Anyone can operate. One hand control, fast load spotting, flexible Herc-Alloy steel load chain, upper and lower safety limits, low power consumption, lifetime lubrication and fully enclosed working parts are just a few COMET advantages.



\* The faster, more efficient overhead handling of materials and parts with CM COMET Hoists is an immediate way to increase output and reduce unit production costs. Workers' energy is conserved for full day maximum efficiency. Floor space is saved. Production moves smoothly.

COMET CATALOG NO. 150...18 pages of illustrated hoist information...sent on request. Prices will be included. Write now!

CM DISTRIBUTORS ARE LOCATED IN ALL INDUSTRIAL CENTERS

**CHISHOLM-MOORE HOIST CORPORATION**

(Division of Columbus McKinnon Chain Corporation)

GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.

SALES OFFICES: New York • Chicago • Cleveland

Circle No. 12 on Reader Service Card for more information

## MEN in the news



Harvey W. Bush  
Visual Production  
Planning, Inc.



Lester F. Cox  
Thermoid Co.

... at Visual Production Planning, Inc.

Harvey W. Bush, former plant manager of Rack Engineering Co. has been appointed general manager of Visual Production Planning, Inc. He recently returned from duty with the Army where he was in charge of research and development of material handling equipment for the Transportation Corps.

... at Thermoid Co.

Lester F. Cox has been elected executive vice president and executive manager of the Thermoid Co., according to Fred Schluter, president. Cox will supervise all divisions of the company which manufactures rubber, friction and textile products for the automotive and industrial markets.

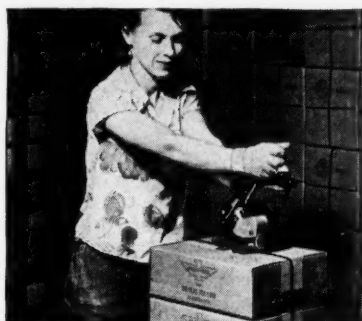
... at Yale & Towne Mfg. Co.

A program of expanded sales-engineering service for Cleveland area industry is being developed under the direction of W. R. Blommel, whose appointment as area branch manager for the company's Philadelphia division has been announced by James H. W. Conklin, general sales manager. Also announced was the appointment of E. D. Bement, Jr., as branch sales manager.

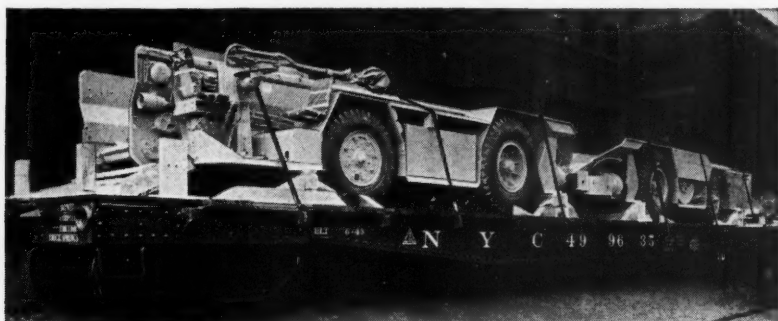


# Acme Steel Strapping Insures S.A. *(Safe Arrival)*

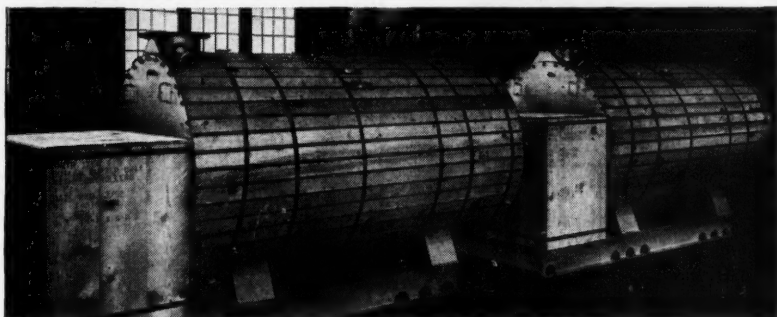
**Cuts costs on packing, loading, shipping, too!**



**KITCHENWARE FROM CALIFORNIA** is strapped together, three or four cartons to a bundle, for faster handling, reduced damage and less pilferage.



**HEAVY MACHINERY FROM PENNSYLVANIA.** Two 12-ton shuttle-cars are loaded on one railroad flatcar for shipment. To hold them in place, other methods proved unsatisfactory, but Acme Steel strapping did the trick, provided security and cut both labor and material costs at the same time.



**BOILERS FROM WISCONSIN** used to be packed in boxes for export. Now they're wrapped in lightweight slats held in place by Acme Steel strapping. The new way not only means safe delivery—it saves 50% on packing costs.



**YOU KNOW WHERE YOU'RE GOING** in Oakland, California. They now fasten their street signs *securely* and economically with Acme Steel strapping.

You name it. Name just about anything you eat or wear or sit on or live in. Chances are that Acme Steel strapping helps get it to you safe. All or part of almost everything you use travels at least part way to you protected by steel strapping.

Acme Steel strapping not only insures safe arrival but it cuts costs, too, on packing, loading and shipping. We have many striking examples of this. Write for them to Acme Steel Products Division, Dept. F 82.



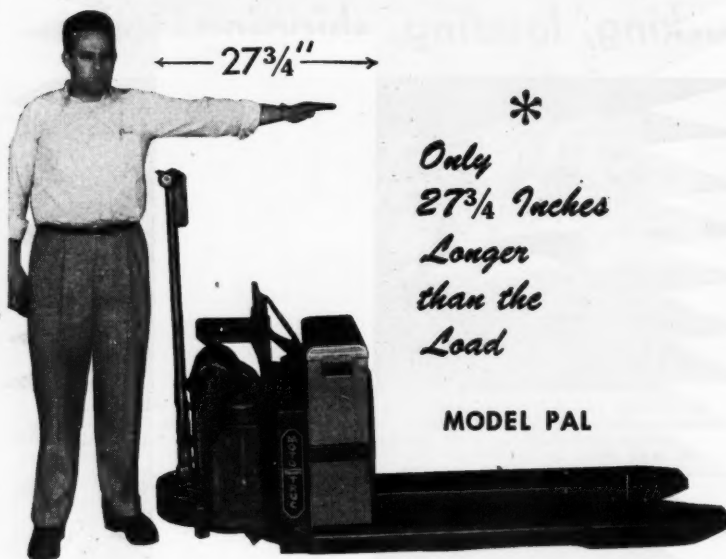
**ACME  
STEEL**

**ACME STEEL COMPANY**

2858 Archer Avenue, Chicago 8, Illinois

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*All the* **POWER** *you want*  
*In an* **ARMS LENGTH**



*Only  
27 3/4 Inches  
Longer  
than the  
Load*

**MODEL PAL**

Think of it . . . in only 27" is packed the complete power unit for the "Walkie" type lift truck. \*Other models are only 23 3/4" . . . That's space efficiency . . . plus!

If you have a material handling problem that requires minimum "operation area", ask about the "Walkie" MOTO-TRUC. Its application in close areas is making history every day . . . write for complete information on all the advantages of MOTO-TRUC.

**Representatives in Principle Cities**

**The MOTO-TRUC Co**

1925 E. 59th STREET • CLEVELAND 3, OHIO  
PALLET . . . PLATFORM . . . HI-LIFT TRUCKS

**LARGEST EXCLUSIVE MANUFACTURER OF "WALKIES"**



Circle No. 14 on Reader Service Card for more information



**Edmund T. Flanagan**  
Fairbanks Co.



**Wm. A. Eger**  
American Box Co.

**. . . at The Fairbanks Co.**

**Edmund T. Flanagan** has been elected vice president in charge of sales for the Fairbanks Co. He brings to his new post more than thirty years of experience selling Fairbanks valves and material handling equipment.

**. . . at American Box Co.**

The American Box Co. has promoted **Wm. A. Eger** to the post of assistant sales manager, according to an announcement by **George H. Kubes**, president. Eger will assist **A. R. Caputo**, sales manager for the company.

**. . . at Westinghouse Electric Corp.**

**John K. Hodnette**, vice-president of Westinghouse Electric Corp. recently announced the appointment of **F. D. Weatherholt** as sales manager of Industrial Products. Weatherholt was formerly manager of the apparatus division's industrial department. **J. C. Fink** has been appointed engineering manager of industrial products. Fink, who was formerly assistant to the vice-president in charge of engineering, will coordinate the engineering activities of all the Industrial Products divisions.

**. . . at Goodyear Tire & Rubber Co.**

Several assignments have been announced by the Pliofilm department. **G. S. Haney** of the sales staff has been named manager of converter and distributor sales; **Frank H. Kimball**, manager of sales development; and **R. W. Anderson**, section chief



Eger  
Box Co.

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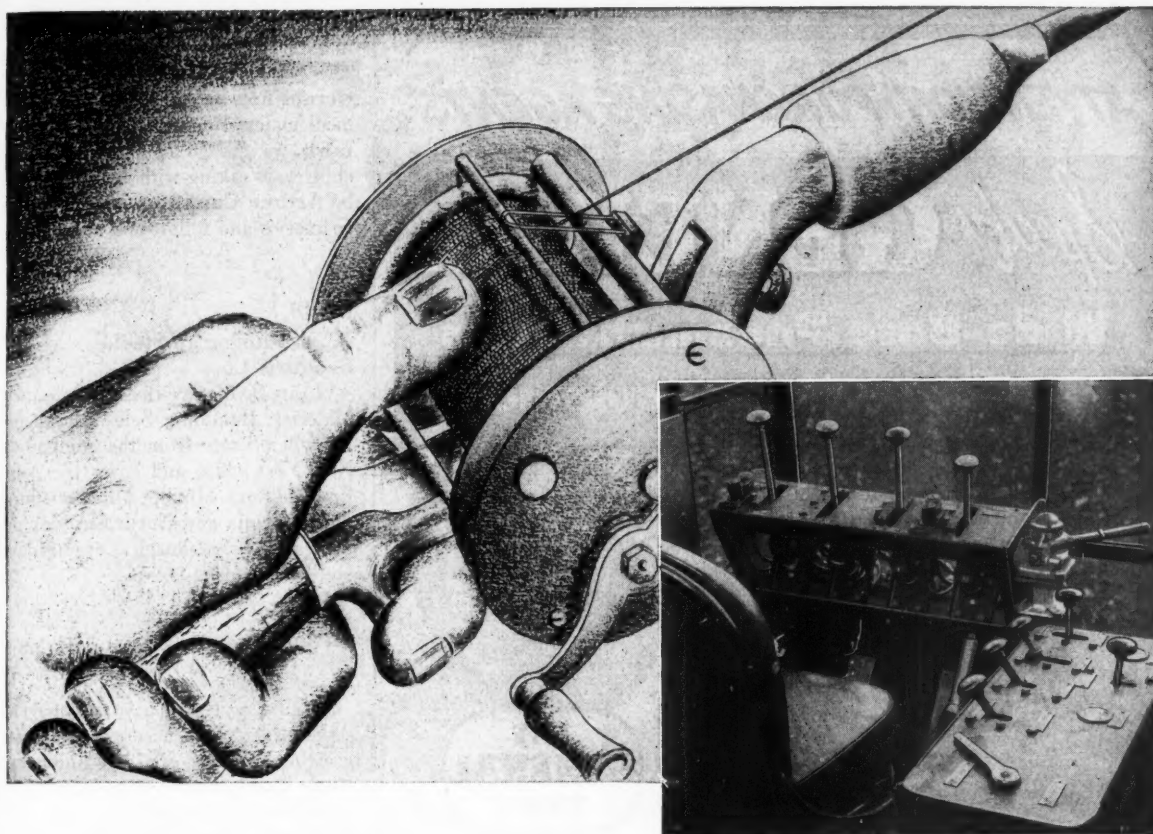
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FLOW



## Complete Command of Operations . . .

### *Right under your thumb*

With LIMA precision air controlled clutches and brakes you get the same smooth, easy, responsive control of the hoist and drag lines that you do when you apply the under-the-thumb tension to the line on a fisherman's reel.

There are other advantages, too. LIMA precision air control promotes long life of the machine and uniformity to the operating cycle. It also automatically compensates the adjustments of the clutches for wear of lining and to meet weather and operating conditions.

Last (but by no means least), there's no mid-afternoon slowdown because of operator fatigue. Both man and machine can work at peak level for the entire shift.

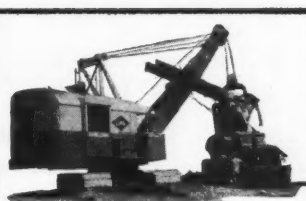
BALDWIN-LIMA-HAMILTON CORPORATION  
CONSTRUCTION EQUIPMENT DIVISION  
LIMA, OHIO

OFFICES IN PRINCIPAL CITIES OF THE WORLD

# **BALDWIN-LIMA-HAMILTON**

**SHOVELS • CRANES • DRAGLINES • PULLSHOVELS • TRUCK CRANES**

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**LIMA SHOVELS** are available in capacities from  $\frac{3}{4}$  to 6 yards.

**LIMA CRANES** are available in sizes to 110 tons capacity.

**LIMA DRAGLINES** are available in variable capacities to suit specific needs.

Wheel or truck mounting is available on machines of  $\frac{3}{4}$  and  $1\frac{1}{2}$  yards capacity.





**ATTENTION: PURCHASING AGENTS**

*Specify* **GENERAL**

**Wide-Base Pneumatic Tires  
On All Your New Equipment**

Available separately or in assemblies of Tires,  
Tubes and Wheels. Size O. D. 8" to 27"—  
200 to 4000 lbs. capacity for  
low or high speeds.



**SAVE TIME • LABOR • MONEY**

- |                                                               |                                                              |
|---------------------------------------------------------------|--------------------------------------------------------------|
| ★ More Load Capacity at Low or High Speeds                    | ★ Slow, Even Wear for Long Service                           |
| ★ Cushion Equipment and Loads, Reducing Breakage and Spillage | ★ High Flotation for Easier Rolling over Soft Ground         |
| ★ Save High Cost Floors and Floor Surfaces                    | ★ Broad Tread Width Rolls Easier, Smoother over All Surfaces |

**Here are a Few of Many Nationally Known Manufacturers  
Who Design Equipment on Generals**

- |                          |                                 |                        |
|--------------------------|---------------------------------|------------------------|
| • The Colson Corporation | • Parker Sweeper Company        | • Kwik-Mix Company     |
| • The Fairbanks Company  | • The Prime Mover Company       | • Moellenbrock & Wilke |
| • G. H. Tennant Company  | • The Rapids Standard Co., Inc. |                        |

*Rigid*



**CASTER FORKS**

Rigid and swivel caster forks for these tires available singly or as identical pairs in a wide range of sizes.

SEND FOR CATALOG . . . DEPT. 2

*Swivel*



**The GENERAL TIRE & RUBBER Co. • AKRON, OHIO**

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in charge of scheduling and deliveries. Working with Kimball will be **Gerald Fox** on coordination of technical material and **Thomas McCormish**, in charge of packaging machinery. Working with Anderson will be **Arthur Cunningham** on customer queries and follow-ups.

**. . . at Pittsburgh Steel Products Co.**

**John B. McCrea** has been named Material Handling Sales Engineer. He will operate from the company's New York office and cover the New England and Middle Atlantic states plus Virginia and North Carolina in the sale of Pittsburgh Cargotainers and Bulkheads.

**. . . at Hyster Co.**

A new post has been created to service better the needs of the fast-growing motor freight industry. **Peter Lewis** has been assigned as a motor sales representative and will work out of the Peoria office of the company.

**. . . at The American Pulley Co.**

**Walter L. Connell** has been promoted to the post of regional manager. To succeed Connell, the company has appointed **Gail E. Cogan** as district manager in the Minneapolis territory. Cogan's territory includes the states of Minnesota, Iowa, North and South Dakota, Nebraska, and part of Wisconsin, Michigan, and Canada. **Robert E. Kochs** has been appointed district manager of the Rochester Territory. His territory includes New York State and a part of Pennsylvania.

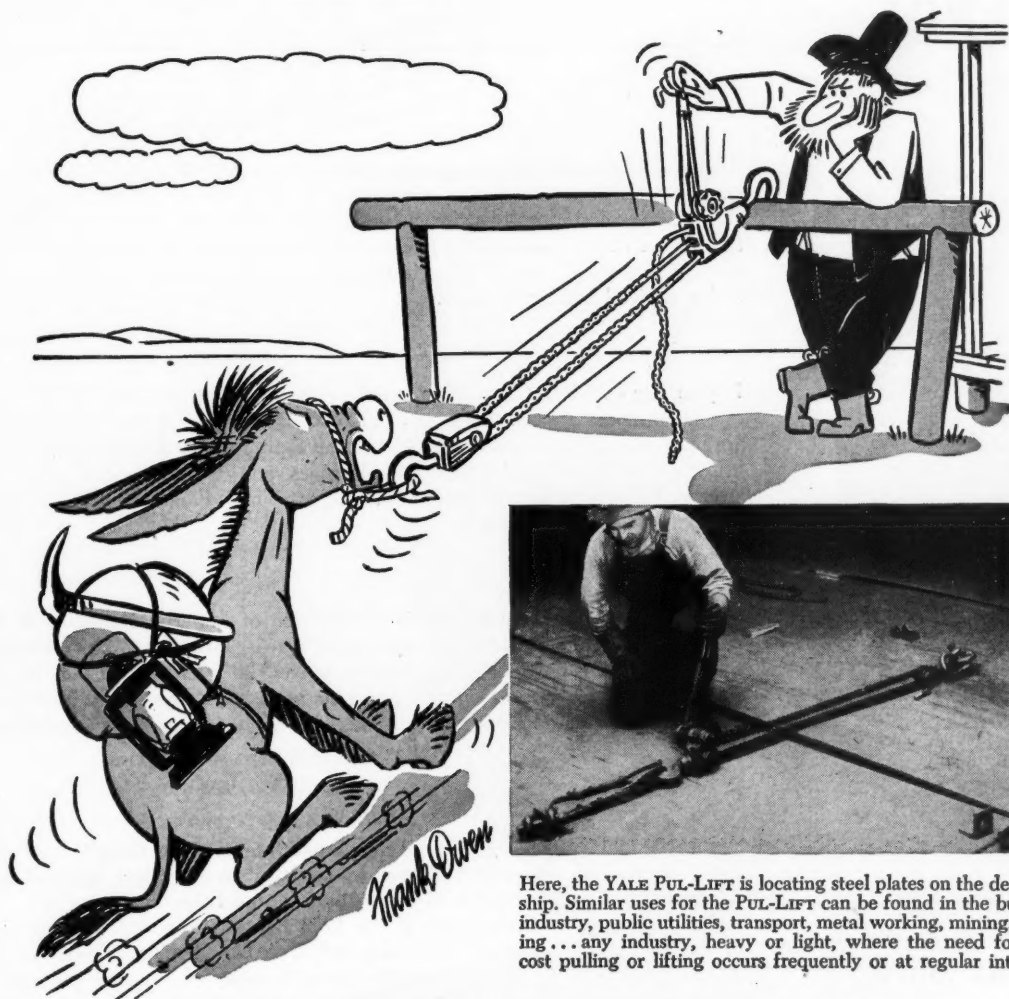
**. . . at Acme Steel Co.**

**Bartlett Richard**, assistant to the vice president in charge of production was elected to the board of directors to replace **Ralph H. Norton** who resigned. All other directors of the company were re-elected for another term.

(Turn to page 104)



# There's a YALE hoist for every lifting need!



Here, the YALE PUL-LIFT is locating steel plates on the deck of a ship. Similar uses for the PUL-LIFT can be found in the building industry, public utilities, transport, metal working, mining, farming... any industry, heavy or light, where the need for low-cost pulling or lifting occurs frequently or at regular intervals.

Industries of all types solve thousands and thousands of difficult *lifting* and *pulling* problems with the YALE PUL-LIFT. Universal ratchet action makes it as easy to use as a wrench... light weight means one-man operation... exclusive YALE design provides capacities of up to 15 tons. Yes, your business can realize important savings in time, money and manpower by applying the YALE PUL-LIFT to countless maintenance and construction operations. CALL YOUR LOCAL YALE INDUSTRIAL DISTRIBUTOR FOR COMPLETE INFORMATION... he's listed in the classified pages of your local phone directory under the heading Hoists, Industrial.

YALE is a registered trade mark of The Yale & Towne Mfg. Co.

The Yale & Towne Manufacturing Co., Phila. 15, Pa.

MAIL THIS COUPON TODAY

**The Yale & Towne Mfg. Co., Dept. 48-A**  
Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

I'm interested in lifting for less with a YALE Hoist.  
☐ Please have your local Hoist Distributor call on me.  
 Please send detailed literature on:  
☐ YALE Pul-Lifts. ☐ YALE Hand Hoists. ☐ YALE Electric Hoists.

Company \_\_\_\_\_  
 Name \_\_\_\_\_ Title \_\_\_\_\_  
 Street \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_  
 In Canada write: The Yale & Towne Manufacturing Co., St. Catharines, Ont.

## YALE PUL-LIFTS

**SOLD ONLY THROUGH INDUSTRIAL DISTRIBUTORS**

Yale Gas and Electric Industrial Trucks • Yale Worksavers • Yale Hand Trucks • Yale Hand and Electric Hoists • Yale Pul-Lifts

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# NEWS VIEWS TRENDS

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## WESTERN EXPO TO BE LARGEST

The 4th Western Packaging and Material Handling Exposition is reportedly going to be the largest and most comprehensive of the series to date. It is reported that almost 200 exhibitors will participate in the affair in Shrine Convention Hall, Los Angeles, August 12-14. Concurrently in close cooperation with the exposition, the University of Southern California's Industrial Engineering Department will hold a packaging and material handling institute.

## HANDLING OVERHEAD

If you use overhead handling anywhere in your plant you won't want to miss the article on that subject in this issue of FLOW. 20 examples of good overhead handling are illustrated under headings like "Overhead Equipment in Receiving and Shipping", "How to use Handling Equipment at Machines and Work Stations", "How to Use Overhead Handling Equipment for Inter-departmental Flow", and "Using Overhead Equipment for Maintenance."

## ENGLISH INSTITUTE

Now in the formative stages is an Institute of Material Handling in England. It is not a new group but is the outcome of a reorganization of the previous group which included manufacturers and representatives. It is felt that the new membership which will include users only will prove more satisfactory. All who are interested in furthering good techniques in material handling are being invited to join. Secretary of the group is M. W. Paynter, London.

## NEWS ABOUT SIPMHE SHOW

"Making Profits through Packaging and Material Handling" will be the theme stressed at the seventh annual Industrial Packaging and Material Handling Exposition to be held October 14-16 in the Chicago Coliseum.

R. C. Cragg, general chairman of the 1952 Exposition, which is being sponsored by the Society of Industrial Packaging and Materials Handling Engineers, declared that emphasis will be placed upon this theme because of the multiple undermining of profits through direct and indirect taxes, constantly increasing labor costs, and other factors that make economy essential in all operations.

Complete details of this show will be the subject of a feature article in September FLOW.

## ANSWERS TO SCRAP PROBLEMS

Experts at the Material Handling Institute Scrap Symposium in Chicago recently heard problems presented by troubled companies, and then proceeded to offer suggestions for their solution. Chances are that some of the solutions can be adapted to your plant. Don't neglect to read a report on these proceedings in this issue of FLOW.

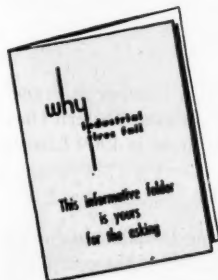
## BETTER SHIPPING AND HANDLING

A Better Shipping and Handling Exposition was held recently under the sponsorship of the Syracuse Traffic Club. Among the companies with working displays at the show were: Yale & Towne Mfg. Co., General Electric Co., Lamson Corp., Robert Gair Co., Signode Steel Strapping Co., Minnesota Mining & Mfg. Co.

Turn To Page 20

# *Rolling Everywhere* **on MONARCHS**

● *You find lift trucks everywhere. • They lift, they store, they place, they transport . . . and they carry the bulk of the material handling work. Many of these power units roll on Monarch Tires . . . specifically Mono-Cushions. • Mono-Cushions cushion the countless shocks, they're easy on the trucks, easy on the loads, easy on the floors and easy on the drivers. • Size for size, Monarch's Mono-Cushions soak up the bumps better and save a lot of maintenance. • When you need tire replacements, order from your truck manufacturer. He can supply you, through his distributors, with famous Mono-Cushions.*



THE  
**MONARCH**  
RUBBER COMPANY

**501 Lincoln Park • Hartville, Ohio**

SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

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## NEWS, VIEWS, TRENDS . . . (cont'd)

---

### SCHOOL'S IN AT HYSTER

**Hyster Co.** recently conducted an export sales and service school at its plant in Peoria, Illinois. Management trainees of Hyster dealers from all parts of the world attended the school. A series of lectures and demonstrations of Hyster equipment made up most of the course. In charge was Clyde Dean, Jr., Hyster export sales manager.

### FORK TRUCK KNOW-HOW

An article which all fork truck operators should read is the one in this issue on recommended procedures for fork truck operators. It lists some valuable do's and don'ts which can reduce maintenance, increase life of your equipment, speed up handling, and increase safety.

### SALES CONFAB

**The Raymond Corp.** recently held two regional sales conferences; the first at their Greene N. Y. plant and the second at the Blackstone Hotel, Chicago. A total of 107 sales representatives attended the two-day session conducted by the company's sales department. Subjects discussed included new and old products, competition, service, installations and sales promotion plans.

### KOEHRING ORGANIZES SUBSIDIARY

**Koehring Co.** has announced the organization of a subsidiary company to be known as Koehring Southern Co. It will provide increased facilities for the company to develop and manufacture new models of power shovels and cranes, it was announced. E. A. Brugger, vice president and general manager of Koehring has appointed N. J. Decker, to supervise installation of new machinery and start of operations at a new plant of Koehring Southern Co. in Chattanooga.

### NEW ADDRESSES

**Quaker Rubber Corp.** has announced a new compounding building and two branch warehouses. The compounding and mixing building is located at Quaker-Rubber Corp., Div. of H. K. Porter Co., Inc., Philadelphia. A branch warehouse and sales office under the supervision of W. W. Hutchinson, is located at 430 South Mill Street, Lockland 15, Cincinnati, Ohio. Another warehouse and sales office is at 1327 Levee Street, Dallas, Texas. D. C. Hahn is the district manager in charge of the office.

**Bowers Battery & Spark Plug Co.,** Reading, Pa., has opened a Pittsburgh branch to serve dealers in that area. Distributor sales for Western Pennsylvania, Eastern Ohio and West Virginia are to be handled from the Pittsburgh office. Address is 4909 Liberty Ave., and Halleck W. Bauer will direct the staff.

**Harnischfeger Corp.** has officially opened its new Diesel Engine Division in Crystal Lake, Illinois. It is expected that the new division will triple production of the company's 2-cycle diesel engines.



**EXCLUSIVE FEATURES  
MAKE MOBILIFT  
BEST!**

**✓ Lev-R-Matic Drive**

Grouped 2-way PUSH-PULL levers give instant, finger-tip control... forward, back, elevating, and tilting. MOBILIFT multiple disc clutch insures smooth, positive action...THERE ARE NO GEARS TO SHIFT!

**✓ Mobil-Chain Lift**

Controlled power, roller-chain-operated lift allows unobstructed view between uprights.

**✓ Mobilift's 3-Cylinder Heavy Duty Engine**

Air-cooled, compact, well-balanced and operates smoothly for long trouble-free service

# The MOBILIFT 6-10\*

## FORK LIFT TRUCK

★ **117" Lift... Floor-to-Forks**

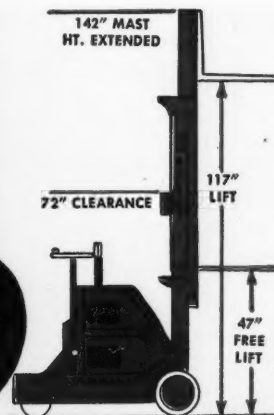
★ **72" Clearance**

★ **47" Free Lift**

MOBILIFT'S "SIX-TEN" solves a big problem when you need a fork-lift truck with *LOW* clearance and *HIGH* lift! The "SIX-TEN" gives you a six foot clearance and virtually a *ten* foot lift...floor-to-forks. The MOBILIFT "SIX-TEN" easily enters truck bodies and low clearance doors, yet *tiers 3 pallets high*... "SIX-TEN"—from 6 feet low to 10 feet *high*...floor-to-forks!

The "SIX-TEN" MAST is available on the versatile Model "E" 2,000-lb. capacity (outside turning radius, 57"; turns in inter-aisles, 53"; width overall, 33"; length, less forks, 64"), and also on the EW-2,500-lb. capacity.

The H (3,000-lb. cap.) and HW (3,500-lb. cap.) models with "SIX-TEN" mast have a **110" lift** floor-to-forks, **72" clearance**, **45" free lift**.



WRITE TODAY FOR COMPLETE SPECIFICATIONS

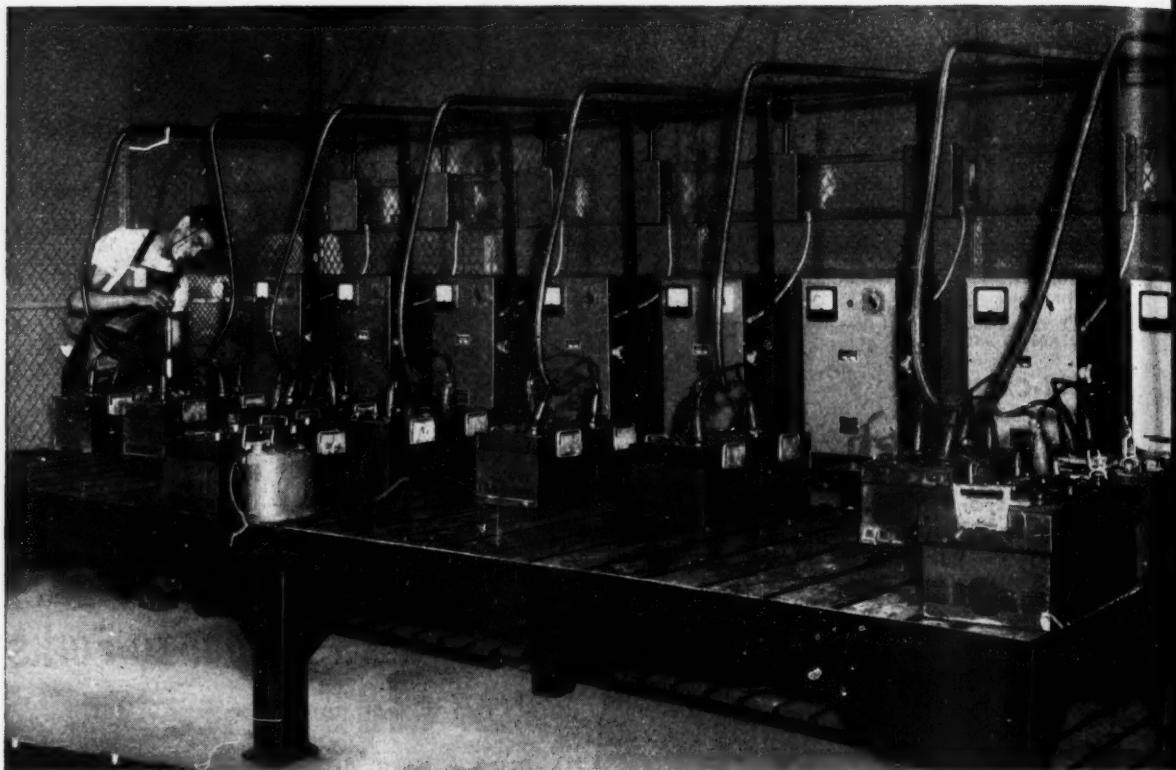
# MOBILIFT CORPORATION

835 S. E. MAIN ST., PORTLAND 14, OREGON

3312 W. 12th, Chicago • 790 Patterson Ave., E. Rutherford, N. J. • 2724 Taylor St., Dallas  
1112 Surber St. N.W., Atlanta • 2720 San Pablo Ave., Berkeley



Circle No. 19 on Reader Service Card for more information



**LARGE INSTALLATION** of metallic-rectifier chargers provides a flexible power supply which is economical regardless of charging load. Grouping permits central record keeping and supervision.

Since no special foundation is required, individual units may be added or removed or entire station relocated to meet changing needs. Each unit can be used to charge a variety of batteries.

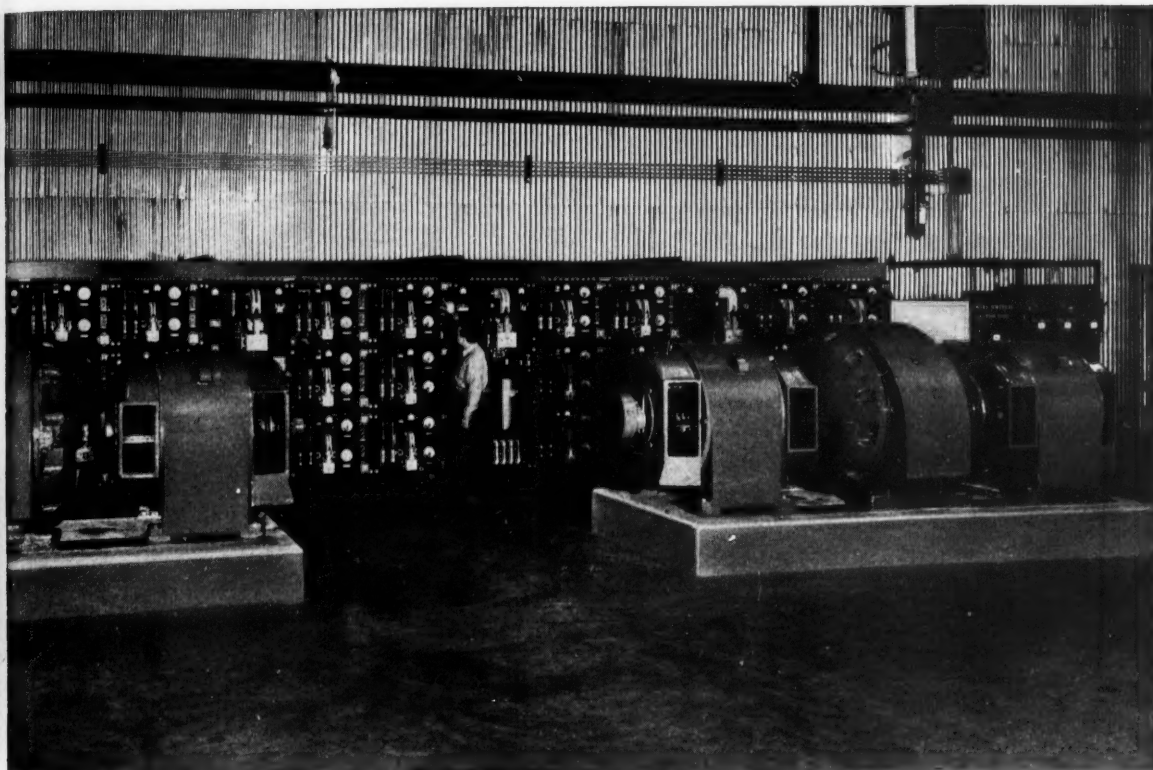
## Eliminate guesswork in



**FOR SMALLER OPERATIONS**, and to save time by spotting chargers throughout large plants, individual metallic-rectifier chargers are ideal. Automatic controls assure proper charging, and only maintenance required is occasional dusting.



**SIMPLE TO OPERATE**, portable and compact, describe new G-E single-circuit, universal-type chargers. A few adjustments permit charging many sizes of nickel-alkaline and lead-acid batteries. Protection and automatic control are built in.



**FOR LARGE FLEET OPERATORS**, multiple-circuit charging equipment like this is tailored to exact needs. This installation is designed to charge 24 sets of 30-cell, 1500-amp-hr bat-

teries. To save space, only the control panel need be located in the charging area. For some large plants it is desirable to locate several smaller rotating chargers throughout the plant.

# in battery-charger selection

**Builders of battery chargers for every use, G.E. helps you with impartial advice on the best types for your needs**

No one battery charger is right for every job. That's why General Electric builds a *complete line* of rotating and rectifier units. And because we do, you can rely on the recommendations of your G-E representative or equipment supplier as sound and impartial.

This application help is based on a thorough study of your particular requirements. Here are three important ways you benefit: (1) you get equipment that will do the job dependably and economically, (2) you are assured of not buying more elaborate equipment

than you need, and (3) you receive advice and suggestions for making the most efficient use of the battery-charging equipment selected.

Whether you operate a few electric trucks or a large fleet, your G-E representative or equipment supplier offers you the most for your charger dollar: a complete selection of top quality equipment plus sound application advice based on years of experience. Be sure to contact him when making plans for new charging equipment. General Electric Co., Schenectady 5, N. Y. 669-4

## ENGINEERED ELECTRICAL SYSTEMS FOR MATERIALS HANDLING

Conveyor drives • Crane drives • Hoist drives • Industrial truck drives and battery chargers

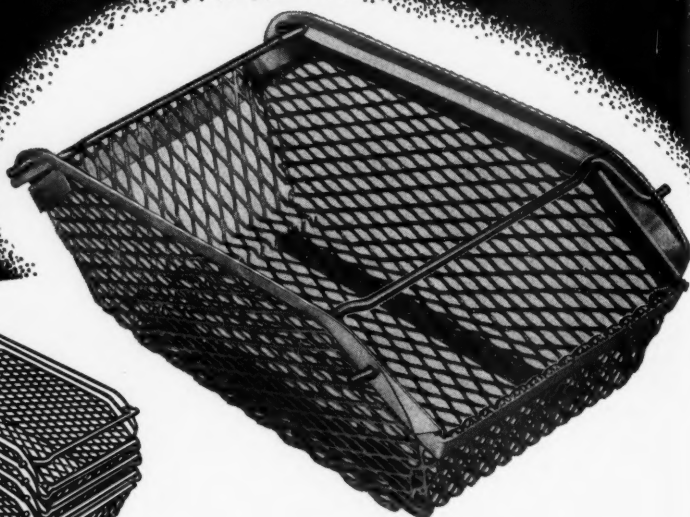
**GENERAL  ELECTRIC**

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# NOW — an expanded metal NESTIER

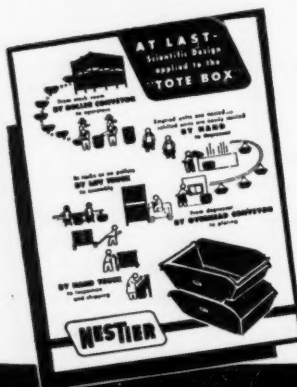
for all  
dipping,  
degreasing,  
cleaning,  
plating  
operations



## IT NESTS IT TIERS

— performs the same  
functions as the  
standard Nestier.

Nestiers nest to save space. Bails prevent complete telescoping, eliminate jamming or sticking. Tiered, bails lock units to form rigid stack. Parts in all units are visible and accessible from either end.



## EVERY MATERIALS HANDLING ENGINEER WILL WANT THIS BULLETIN

Write for this brochure describing the Nestier System, including complete information on racks, trucks, conveyor hangers and inserts.

Our service includes complete engineering advice to systematize small parts handling in your plant.

The demand for a Nestier to fulfill the requirements of all dipping operations has led to the design of this new expanded metal basket.

Expanded metal sheet is actually more rigid than an equal weight of solid steel plate or wire mesh. Formed to the distinctive Nestier shape and equipped with Nestier bails and runners, you have a unit which retains not only its original strength but all of the features which have made the Nestier outstanding.

This new Nestier, available in the two standard Nestier sizes, is made of flattened expanded steel mesh, electro-zinc plated, and is interchangeable with the standard Nestier.

## SPECIFICATIONS

Nestier	Gauge	Mesh	Length	Width	Weight
No. 220	13-15	$\frac{3}{16}$ " x 1"	22 $\frac{3}{8}$ "	12 $\frac{1}{2}$ "	6 lb. 14 oz.
No. 175	16-18	$\frac{3}{16}$ " x 1"	18 $\frac{1}{16}$ "	9 $\frac{1}{8}$ "	4 lbs.

No. 220 — Cubic content — 880.3 cu. in. Capacity — 200 lbs. each.  $\frac{3}{16}$ " balls will support maximum load of 600 lbs. or 3 tiers of loaded units.

No. 175 — Cubic content — 395.6 cu. in. Capacity — 100 lbs. each.  $\frac{1}{4}$ " balls will support maximum load of 400 lbs. or 4 tiers of loaded units.

THE CHARLES WM. DOEPKE MFG. CO., INC.,  
ROSSMOYNE, OHIO

# NESTIER

IT NESTS — IT TIERS

*Metal Specialties Division*

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AUGUST, 1952 • FLOW



## Association and Society News



Darrell A. Buhlman, President  
Michigan Chapter, SIPMHE

• **New officers** of the Michigan Division of the Society of Industrial Packaging and Material Handling Engineers are: Darrell A. Buhlman, president; Richard Brand, vice president; Alfred Woodcroft, vice president; James Greene, vice president; Elmer Hamina, treasurer; Charles E. Cummiskey, secretary.

• **An all-day program** of material handling subjects featured the Eastern Great Lakes Regional Conference of the American Material Handling Society, in Pittsburgh recently. Featured talks were: "Handling Problems at a Grain Truck Terminal", by Tom Anderson, Anderson Elevator Co. (The installation discussed in this talk was the subject of an article in last month's FLOW); "Material Handling Equipment on Motor Freight Terminals" by Hoy Stevens, American Trucking Association; "Storage Systems For Raw, In Process and Finished Materials" by Carl E. Blass, Talon Inc.; "A Cost Accounting System for Material Handling", by W. B. McClelland, The W.



### IN STORAGE AREAS

Take narrow aisles in stride — use the RAYMOND Low-Lift Truck to pick up raw materials or store finished parts! This truck actually right-angle stacks skid loads 48" long in aisles only 5 ft. wide — thanks to its short length and patented\* off-set drive wheel with 200° turning arc.



### AT ELEVATORS

Lose time moving materials from floor to floor? Not with a RAYMOND Low-Lift Electric Truck! This truck operates safely on low-capacity elevators or floors because it's so light, so compact, has no counter-weight. Operator rides in safe standing position, protected by metal guard.

Choose

**RAYMOND**



**MODEL EL4F** for skid platforms. Also available for single and double-face pallets — Model EL4F.

\* Patent No.  
2,564,002

## CHECK YOUR HANDLING at these key points

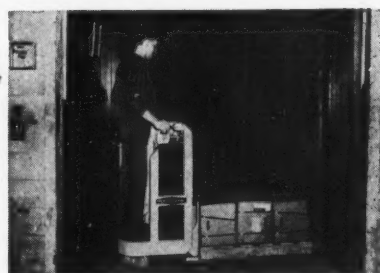
### ON PRODUCTION FLOOR

Need more space for production? Then put this RAYMOND Low-Lift Electric Truck to work! It lets you consolidate stock areas — serve 2 to 4 production areas using a single truck. Replaces several hand or walkie-type trucks — spots skid loads of work-in-process right at machines.



### ON LOADING DOCKS

No more slow-downs when you load box-cars or trucks with a RAYMOND Low-Lift Electric Truck. It travels up to 6 mph empty, up to 5 mph loaded — features fast starting and stopping. Patented\* RAYMOND knee-action swivel caster compensates for uneven floors. Truck has 4,000 lb. capacity.



## Low-Lift ELECTRIC TRUCK

**GET THE FACTS** Send for Bulletin 750 and learn the RAYMOND Low-Lift Truck story! Ask for a demonstration.

### The RAYMOND CORPORATION

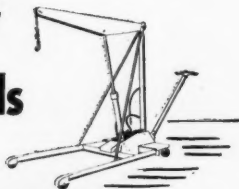
3376 Madison St., Greene, N.Y.

Gentlemen: Please send me Bulletin 750 on your Low-Lift Electric Truck. I'm interested in a demonstration: ☐ Yes ☐ No

NAME \_\_\_\_\_ TITLE \_\_\_\_\_  
COMPANY \_\_\_\_\_  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_

Circle No. 22 on Reader Service Card for more information

# We'll Make this MANZEL FLOOR CRANE to meet *Your* handling needs

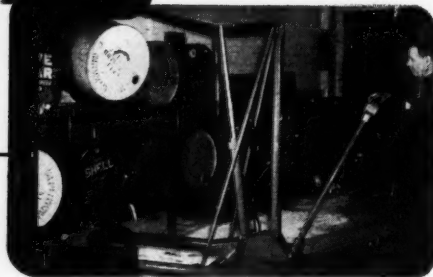


**MACHINE  
REPAIR**



**MATERIAL  
HANDLING**

**DRUM  
STORAGE**



The heaviest, bulkiest, clumsiest loads are easily transferred from place to place, by *one* man guiding this Portable Hydraulic Crane. It steers accurately through tight spaces and rides safely over any surface. Let Manzel engineer one to *your* requirements. For information write...



286 BASCOCK STREET  
BUFFALO 10, N. Y.

Circle No. 23 on Reader Service Card for more information

B. McClelland Co.; "Integration of Plant Layout and Material Handling," by Sheldon Kavieff, DeSoto Division, Chrysler Corp.; "Missing Links in Material Handling Problems", by Russell J. Greenly, Jones & Laughlin Steel Corp.

• **Irvin Danielson**, chief packaging engineer of the Minnesota Mining and Mfg. Co. spoke on pressure sensitive tapes at a recent dinner meeting of the Wisconsin Chapter of the Industrial Packaging and Material Handling Engineers. With his talk, short movies were shown, case histories were discussed, and demonstrations with various tapes were given.

• **The American Material Handling Society's** annual national award of merit was awarded to Irving M. Footlik, at the annual board meeting in Cleveland recently. It was the second such award received in a month by Footlik, instructor of material handling in the industrial engineering department at Illinois Institute of Technology. He had previously been honored with the first annual Chicago area award of merit. His citation was for "outstanding contributions as a teacher and consultant on material handling and his long leadership in the society."

• **The sixteenth annual time and motion study and management clinic** sponsored by the Industrial Management Society will be held November 5-6-7, at the Sheraton Hotel, Chicago. More than 2000 industrial engineers, works managers, plant superintendents and supervisors are expected to attend. Feature of the event will be the annual methods improvement competition, inaugurated last year to stimulate advances in industrial engineering techniques and applications.

# B.F. Goodrich

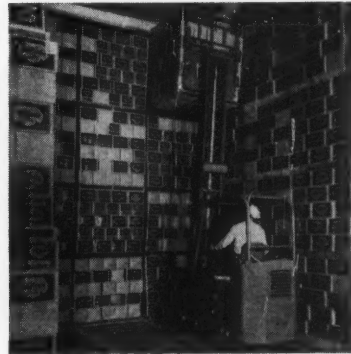
industrial tires save with every turn of the wheel



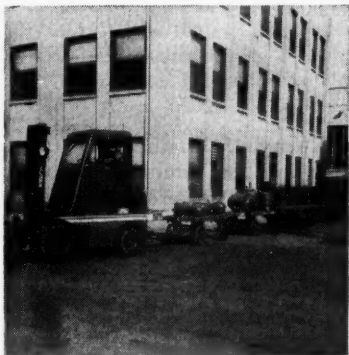
*Extra-heavy loads to handle?*



*Use hand trucks?*



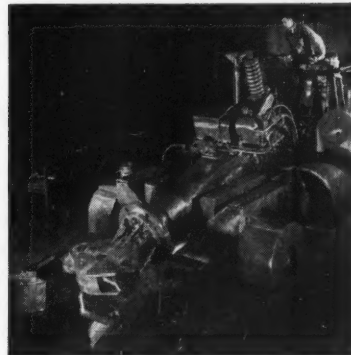
*Do you have maneuverability problems?*



*Know how to save on trailer tires?*



*Which is best? Pneumatics? Solids? Semi-pneumatics?*



*Problems with greasy floors—unusual loads?*

## Free **T&W** ANALYSIS may save you up to 50%

• No matter what materials handling problems you have involving tires and wheels, you can get expert advice and assistance that will save you money. Under the B. F. Goodrich T&W (tire and wheel) Analysis Plan, a man trained in this work analyzes your operation. He carefully notes the type of equipment, loads, speeds, hauling surfaces and any unusual problems involved. Then he makes recommendations as to the right type, size, tread compound and tread design best suited for your job. He makes suggestions on maintenance.

Because B. F. Goodrich makes a *complete* line of tires—solids, pneumatics and semi-pneumatics—and offers a wide range of tread designs and compounds, his advice is impartial—unbiased.

Why not take advantage of this service without any obligation? Send in the coupon or call your B. F. Goodrich dealer. BFG dealers sell and service a complete line of industrial tires.

A special T&W Analysis Plan is available for manufacturers of industrial hauling equipment.



The B. F. Goodrich Co.  
Department TW-197  
Akron, Ohio

Please give me additional information on your new Tire and Wheel Analysis plan.

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Company \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

Circle No. 24 on Reader Service Card for more information



**NEW!**



## Lock 'em — and Leave 'em

• If you have a problem lifting, moving or containing bundles of bars, rods, or pipes—forget it. Get some of the new **AMERICAN Bundling Chains** with automatic locks. They're easy to hook up, and once you lock them, they stay locked. Yet you can unlock them with a flip of the fork. Satisfied users tell us they have made possible real savings in handling costs.

Write today for information on Bundle Locks or the 1001 other items in the complete **AMERICAN Chain** line.

(Patent Pending)

**AMERICAN Chain**

York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles,  
New York, Philadelphia, Pittsburgh, Portland,  
San Francisco, Bridgeport, Conn.

Circle No. 25 on Reader Service Card for more information

## news from the SALES FIELD

**Lee H. Long Associates Inc.** has announced that **Lee H. Long** has retired as president. Taking over his duties as president is **Clifford C. Haddrell**. Long started his career in the material handling equipment industry with The Automatic Transportation Co., where he contributed significantly to the development of the electric industrial truck. In 1936, he started his representation of the Yale & Towne Mfg. Co., Philadelphia Div., and in 1945 was joined by Haddrell.

**Kornylak Engineering Corp.** has joined the **Manning, Maxwell, and Moore Co.** group of distributors. The company's franchise is for the states of New York, and New Jersey. Address is 513-521 Communipaw Ave., Jersey City 4, New Jersey.

**The Colson Corp.** announced recently the appointment of the **Oxford Sales and Service Co.** as its franchise distributor for the state of Connecticut on the complete line of Colson casters, industrial and institutional equipment, industrial trucks, hospital equipment and invalid chairs. Colson has closed its own office in Hartford and the entire Connecticut sales operation will be conducted by Oxford from its headquarters at 25 Chapel Street.

**H. E. Fortna & Bro.,** Reading, Pa., recently held a material handling show at the Antietam Valley Association Ball Room. 866 guests from the area registered as having visited the



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affair. Among the manufacturers who were represented with equipment on display, were: Anthony Truck Co., Bassick Co. Belt Corp., Big Joe Mfg. Co., C&D Batteries, Equipment Mfg. Co., The Fairbanks Co., H. J. Ferguson Co., Lewis-Shepard Products, Inc., Lug-All, Magline Inc., Parker Sweeper Co., Pittsburgh Steel Co. Powell Pressed Steel Co., Quaker Rubber Co., Ruger Equipment Co., Yale & Towne Mfg. Co., Aerol Co., Inc., and B. F. Goodrich Co.

**Stiles Conveyor & Transmissions** was organized recently to act as a distributor for makers of material handling equipment, conveyors, packaging machinery, and transmission parts. Address of the new concern is P.O. Box 153, Little River Station, Miami 38, Florida. Area covered will be the state of Florida with sales branches located at Tampa and Jacksonville. Heading the company is **John W. Stiles**, formerly president of Island Equipment Corp.

**Micheal Cayne**, vice-president of the **Albert H. Cayne Equipment Corp.**, New York, died recently.

**Harry F. Haldeman, Inc.**, 1106 South Hope Street, Los Angeles, has been appointed sales representative on the West Coast for Dravo Transportainers, it was announced recently by Dravo Corp.

**The William Pike Co.**, distributor of material handling and weighing equipment has moved to new and larger quarters at 3440 East Jefferson Ave., Detroit. According to **W. J. Thompson**, president, the new facilities and location make possible visual display space and warehouse space for complete stocks as well as service and repair shop facilities. The property includes a large customer parking lot.



2-Wheel  
GEARED  
TROLLEY ASSEMBLY

### Army Type **WRIGHT SAFEWAY**

• A steel hand hoist with compact, adjustable suspension and trolley to fit various width I-beams. Designed for low overhead. Easily converted to 2-wheel geared trolley unit.

Longer-life features include: steel in all load-supporting parts; load sheaves with five formed pockets; automatic load chain lubricator; alloy steel load chain; swiveling drop-forged load hook; alloy steel, machine-cut gears; fully enclosed, self-oiling gear case.

See your **WRIGHT** distributor or write for Bulletin **DH-269**.

**ACCO**



**WRIGHT HOIST DIVISION  
AMERICAN CHAIN & CABLE**

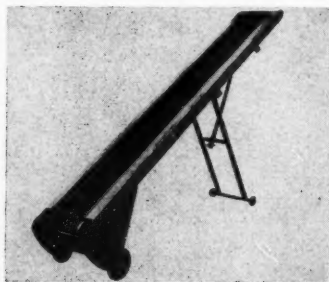
York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.

**WRIGHT**  
Hoists  
Trolleys  
Cranes

Circle No. 26 on Reader Service Card for more information

# What's NEW in equipment

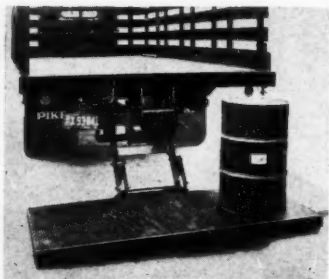
*For more information on these products, use the postcard bound into this issue.*



## **Portable Belt Conveyor—Speedways Conveyors Inc.**

A completely portable and adjustable belt conveyor has been announced by Speedways Conveyors Inc. It is said to be ideally suited to warehouse stacking, as a booster in gravity conveyor lines, for moving materials up average stairways, and many other everyday conveyor jobs. Called the Speedlift, Jr., the 10-ft. long conveyor reportedly can be used at any angle up to 30°. It has a 12-in. wide "ruff-top" 3-ply duck belt. According to the manufacturer, the conveyor is electrically reversible.

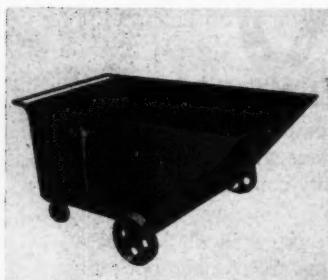
Circle No. 140 on Reader Service Card for more information



## **Hydraulic Tailgate—Cemco Industries, Inc.**

Economy, safety and speed are three points stressed for its hydraulic tailgates by Cemco Industries Inc. The unit is said to be easily installed on short or long trucks. In raising or lowering, the tailgate can be stopped at any height above the ground. When raised, it stops automatically at truck floor level. Lifting capacity is 2,000 lb, but this can be varied by adjusting the pump valve. (Too great a weight can damage the frame of a light truck). Raises loaded gate in 10 to 11 seconds.

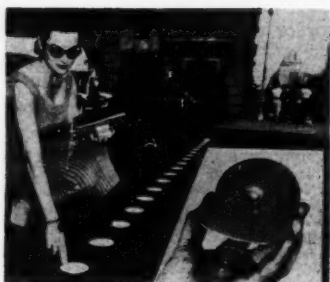
Circle No. 141 on Reader Service Card for more information



## **Hand Dump Truck—Palmer-Shile Co.**

Scrap handling is said to be made easier by this hand dump truck manufactured by Palmer-Shile Co. It is constructed of heavy sheet steel, reinforced with a flange along the top edge. The  $\frac{5}{8}$  in. round rod iron handle is welded to the body of the truck. Top measures 25 $\frac{3}{4}$ " x 45"; bottom is 25 $\frac{3}{4}$ " x 27"; depth is 17 $\frac{1}{2}$ "; overall height is 23". It can be furnished higher or lower to suit special requirements. Two eight-in. steel wheels and two four-in. metal swivel wheels are standard equipment. Maximum load is  $\frac{1}{2}$  cu. yd.

Circle No. 142 on Reader Service Card for more information



## **Plastic Lane Marker—Traffic Safety Supply Co.**

The Dur-O-Line marker is a solid color plastic disc, 4 $\frac{1}{2}$  in. in diameter that reportedly can be quickly put down on any surface, concrete, asphalt or wood. According to the manufacturer, the markers will stand 63,000 lb. pressure which is many times maximum load limits. Therefore, breakage is an almost non-existent problem. It is stated that two installers can lay 100 Dur-O-Line markers per hour. The marker is recommended for marking traffic lanes in factories, warehouses, parking lots, etc.

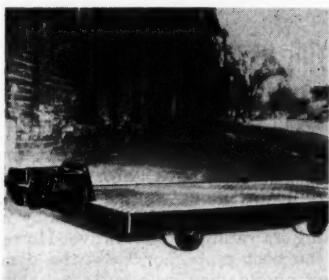
Circle No. 143 on Reader Service Card for more information



#### **Magnetic Sound Film—Bell & Howell Co.**

A 16mm motion picture projector which records and plays back sound by a stripe of magnetic material on the edge of the film has been developed by Bell & Howell Co. A new process is used to permanently coat film for magnetic sound. When the film is projected, sound can be recorded and stored on the magnetic stripe, ready for instant playback. Commentary can be erased and re-recorded an unlimited number of times. Possible uses include time & motion studies and employee training.

Circle No. 144 on Reader Service Card for more information



#### **Low Deck Trailer—Thomas Truck & Caster Co.**

This warehouse trailer, made by Thomas Truck & Caster Co. has a deck only eight in. high. It is stated that railroad freight houses and warehouses who haul heavy crates, boxes, machinery and barrels on trailers will like the low deck. Although the deck, made of steel plate, is eight in. high, the automatic couplers are at standard height so the trailer can be used in a trailer train along with any standard warehouse trailer. Load capacity is 6000 lb., standard deck size is 36" x 72".

Circle No. 145 on Reader Service Card for more information



#### **Rock Tire—Frank G. Hough Co.**

The Frank G. Hough Co. has announced as optional equipment for its Payloader tractor shovels a 13:00 x 24-16 ply rock type tire for mining and quarrying service. It is being built for Hough by leading tire companies. According to the announcement, the big advantage of the tire is that it is about 35% less expensive than the 13:00 x 24-18 ply which it replaces. Also, it fits the standard 24-in semi-drop center rim, eliminating the necessity for building special wheels.

Circle No. 146 on Reader Service Card for more information



#### **Twin-Hook Crane—American MonoRail Co.**

This is an application of a three-ton Electrolift twin-hook hoist mounted between the end trucks of an American MonoRail Crane. The hoist is said to have a lifting speed of 24 ft. per min. with a six ft. spread between hooks. All movement is controlled from the pushbutton station in the operator's hands. The crane is equipped with rubber wheel drive for propulsion on the craneway at 125 ft. per min. Other points stressed by American MonoRail Co. include minimum space requirements; efficient use of tank capacity.

Circle No. 147 on Reader Service Card for more information



#### **Slusher Block—Sauerman Bros., Inc.**

Features claimed for a slusher block developed by Sauerman Bros., Inc., include: wider, flatter sheave groove to permit use of larger cable than standard block of the same diameter; extra wide throat opening to pass knotted cable; lighter weight than other blocks of similar capacity, making for easier handling in tight places. Sheaves and frame of the block are of differential heat treated alloy steel. A bead cast in the frame is said to protect rim of the sheave and to prevent fouling of the cable.

Circle No. 148 on Reader Service Card for more information

**Turn to page 110**



Panel discussions on how casters help reduce the "Reducible 30%"\*

# MATERIALS-HANDLING FORUM

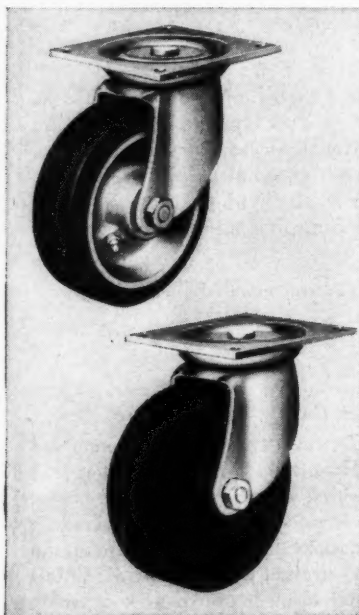
Write us how you've used casters to solve specific handling problems. \$25.00 will be paid for material used.

A SERIES PUBLISHED BY BASSICK, WORLD'S LARGEST MANUFACTURER OF CASTERS AND FLOOR PROTECTION EQUIPMENT

## CASTER LOAD CAPACITIES DEPENDENT ON FLOOR AND OPERATING CONDITIONS

### SOFT RUBBER-TREAD WHEELS HAVE LIMITS

Don't expect a rubber-tread wheel to carry the same load as a metal or hard-tread composition wheel of equal size. Figure the rubber-tread wheel will carry about 50% as much.



For example, Bassick's popular, high-quality, double-ball race, swivel caster No. H6991-2 (bottom) is load-rated at 650 lbs. with a 6 in. x 2 in. semi-steel wheel. The same caster, when supplied with a 6 in. x 2 in. aluminum core rubber-tread wheel, No. H6993R-2 (top), is load-rated at 350 lbs.

Too often someone will replace metal wheels with rubber treads and complain that the equipment is hard to move. Rubber-tread wheels protect floors, but will not give the same ease of rolling as a hard wheel of equal size.

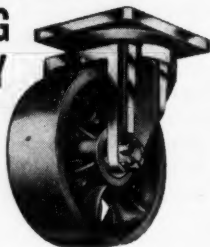
### Speed of Travel, Condition or Type of Operating Surface, Manual or Power Operation Important Factors

All these variable factors must be taken into consideration when ordering casters from the load capacity data given in caster catalogs.

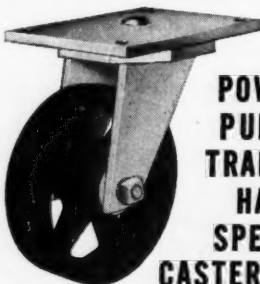
It should be understood that such data can only be an approximation. Casters of similar size and type are

rated differently by different manufacturers. Bassick, with a reputation to maintain as world's largest caster maker, protects its customers by making its ratings conservative. However, the best protection from the dangers of overloading is to be thoroughly familiar with the following facts.

### FAST TRAVEL CUTS CARRYING CAPACITY



The caster shown above, No. H10931-2, a 10 in. heavy-duty model, will carry a static load of over 80,000 lbs., but nowhere near that load in action. Hence, this precision Bassick "machine tool of motion" is rated at 10,000 lbs. It's ideal for heavy units on production lines, and moving or positioning heavy machinery. It is not designed for speed.



### POWER- PULLED TRAILERS HAVE SPECIAL CASTER NEEDS

The caster just discussed would not stand the strain of serving on a power-pulled trailer where speeds may reach 5-10 miles an hour. A specially-designed caster is needed—like this No. 10TS1-2, Bassick's 10 in. trailer type swivel number, load-rated at 2,000 lbs.

### Consider floor surface in determining load

Don't worry too much about overloads if floors are fairly smooth and travel areas free from obstacles. In such a case, the No. H6991-2 would carry 750 lbs. very satisfactorily, though rated for 650 lbs. But if operating conditions are rough, use casters and wheels rated above the maximum loads anticipated. A wheel large enough to easily ride over obstacles should be selected. The larger the wheel, the easier the equipment will roll.

### Full details available on request

Write for Catalog 124A for load capacities of Bassick Casters and Wheels. Satisfied users mean more to us than immediate orders. That's why our ratings are conservative—based on tested average normal operating conditions. Bassick Casters are sold by carefully-selected, local industrial supply distributors. THE BASSICK COMPANY, Bridgeport 2, Conn. In Canada: Belleville, Ont.



\*According to cost analysts, materials-handling (about 30% of total cost) affords about the only real opportunities for cost reduction today.

**Bassick**  
A DIVISION OF **STEWART SW**  
MAKING MORE KINDS OF CASTERS...MAKING CASTERS DO MORE

Circle No. 27 on Reader Service Card for more information



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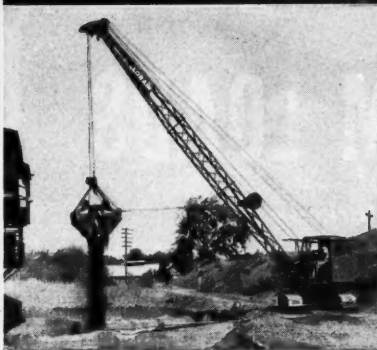
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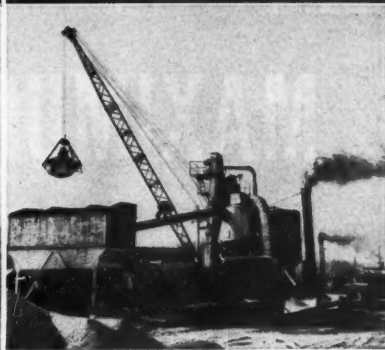
CLINKERS



AGGREGATE



CRUSHED STONE



is **BULK** material handling

a *hot* subject  
in your plant?

HOT SLAG



GYPSUM



■ Bulk materials... are they a problem in your plant? You can solve that problem with a Lorain as these plants and many, many others are doing every day. Regardless of the type of material, the terrain or the travel needs, a Lorain as crane, clamshell, dragline, shovel or hoe can handle the job. What's more, all booms and front ends are easily interchangeable. This means more *different* jobs can be handled—the Lorain kept busy—costs lowered—on the handling of bulk materials, components or finished products, and, as an extra bonus, with a Lorain you get help for those maintenance and construction jobs that constantly crop up around a plant. There is a cost-cutting Lorain for any material handling job—in capacities up to 45 tons—on crawlers or rubber tires—and with advanced design and construction features that are the result of 52 years of leadership in the shovel-crane field. "Take the heat off" your material handling problem. Get the full facts from your Thew-Lorain Distributor today.

**THE THEW SHOVEL CO., LORAIN, OHIO**

THEW **LORAIN**

LORAIN

CRANES FOR  
INDUSTRY

Circle No. 28 on Reader Service Card for more information

FLOW • AUGUST, 1952

33

# MAXIMUM LOADS

can be stacked

*higher AND faster*



... when your truck is

## "POWERED BY BOWERS"

You'll find, as many other satisfied users have found, that BOWERS delivers *peak performance* on peak loads. You'll eliminate "down time" because the BOWERS "Modern Power" Grid is actually "years ahead" in grid construction—because it permits power to flow from all sections of the plate with an absolute minimum voltage drop. And because more of its members are buried in the plate's active material, you get *longer plate life* by minimizing grid corrosion. Get all the facts about lower initial cost and lower operating cost. Find out *why* . . .

"POWERED BY BOWERS" MEANS

*power-hour-after-hour!*



## BOWERS FIVE ⑤ CLAD BATTERIES

for industrial trucks

built and backed by **DEPENDABLE** battery specialists

**BOWERS BATTERY & SPARK PLUG CO., READING, PA.**

Circle No. 29 on Reader Service Card for more information

## Literature featured in ads

No matter what materials handling problems you have involving tires and wheels, you can get expert advice and assistance that will save you money, says The B. F. Goodrich Co. The company offers complete information on its tire and wheel analysis plan.

Circle No. 24 on Reader Service Card

Central Fibre Products Co., Inc., offers details on its products for better packaging and shipping—including paperboard materials, corrugated containers, folding and set-up boxes, produce boxes, produce house supplies and expendable fibre pallets.

Circle No. 68 on Reader Service Card

Acme Steel strapping not only insures safe arrival, but it cuts costs on packing, loading and shipping, says Acme Steel Company. More information, plus case-study examples, is available.

Circle No. 13 on Reader Service Card

International Staple & Machine Company claims its retractable anvil stapling machine can close corrugated or fibre containers better, faster and more economically. Circle the number below for detailed information.

Circle No. 62 on Reader Service Card

"VPI Facts" from Angier Corp. describes Angier VPI Wrap, a vapor rust preventive. For shipping or storing metal parts or products, it may be used as a box liner or an envelope as well as a container insert.

Circle No. 66 on Reader Service Card

Complete information from Midwest Precision Corporation describes the Loadmaster trailer caster. Features include Timken roller load bearing, grease retainer and Timken tapered thrust bearing.

Circle No. 106 on Reader Service Card

# Isn't it time YOUR business enjoyed these savings, too?

Only YALE gas trucks have these cost-cutting features:

## FLUID DRIVE

3 to 8 times longer clutch life

## HYPOID GEARS

30% more strength against shock loads

## SHOCKLESS STEERING

passenger car steering ease

## AUTOMOTIVE-TYPE BRAKES

smoother, safer stops

## ROLLER CARRIER UPRIGHTS

less friction and more efficiency

## 65-HP ENGINE

waterproofed and built for rugged constant service

• The modern methods of materials handling made possible by YALE Gas Trucks can cut as much as 75% off your handling costs. You save on maintenance, too, by avoiding the overhauling and parts replacement necessary with less durable equipment.

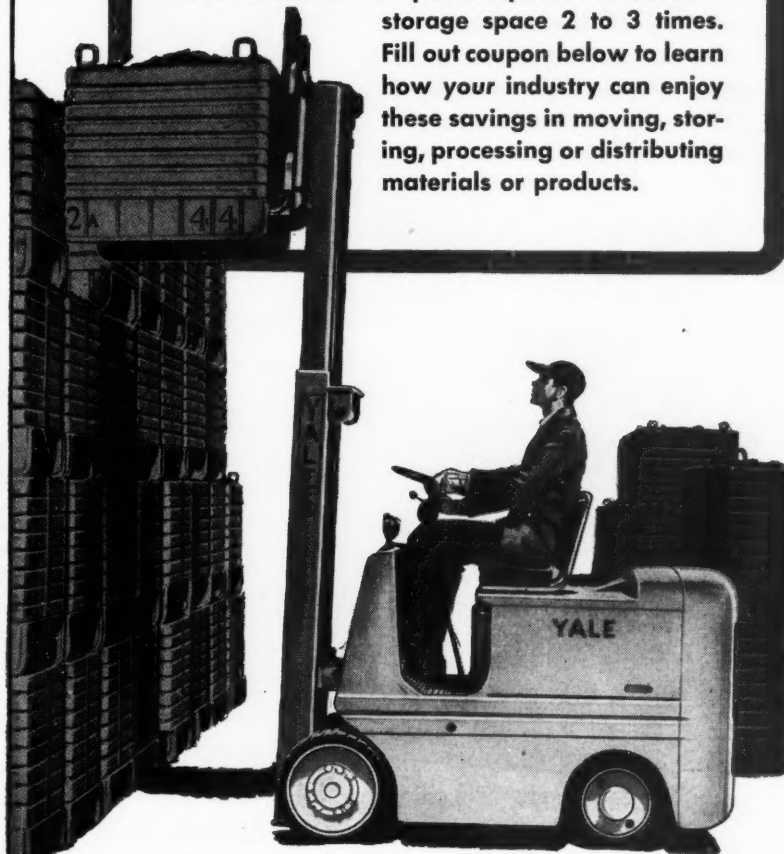
No matter what your industry, YALE Gas Trucks can provide money-saving advantages no other Gas Trucks can offer you. Get the full story from your YALE representative... he's fully qualified to recommend the equipment that will do the best job for you. Or, fill out and mail the coupon.

YALE is a registered trade mark of  
The Yale & Towne Manufacturing Co.

# YALE

**MATERIALS HANDLING  
EQUIPMENT**

In the air conditioning industry, Yale Gas Trucks save time and money in moving bulky packing materials and component parts... increase storage space 2 to 3 times. Fill out coupon below to learn how your industry can enjoy these savings in moving, storing, processing or distributing materials or products.



MAIL THIS COUPON TODAY

## The Yale & Towne Mfg. Co., Dept. 48

Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

How can YALE Industrial Gas Trucks do more—save more—for me?

☐ Please have your local representative call

☐ Please send free copy of

THE PICTURE STORY OF YALE MATERIALS HANDLING EQUIPMENT

Company \_\_\_\_\_

Name \_\_\_\_\_ Title \_\_\_\_\_

Street \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

In Canada write: The Yale & Towne Manufacturing Co., St. Catharines, Ont.

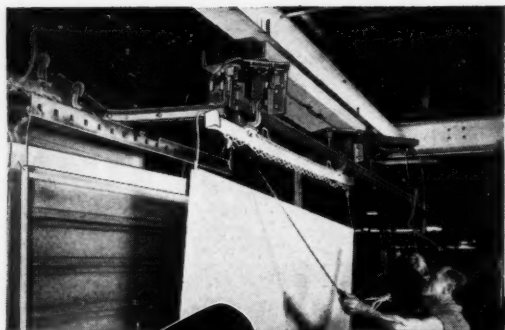
YALE GAS AND ELECTRIC INDUSTRIAL TRUCKS • YALE WORKSAVERS • YALE HAND TRUCKS • YALE HAND AND ELECTRIC HOISTS • YALE PUL-LIFTS

Circle No. 30 on Reader Service Card for more information

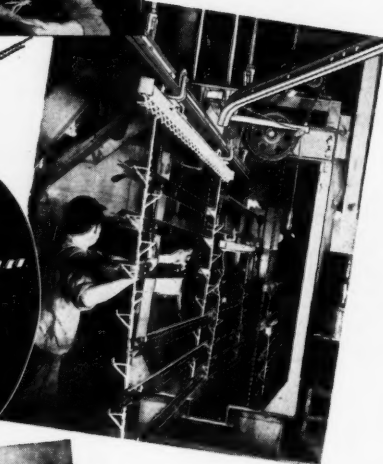
FLOW • AUGUST, 1952

35

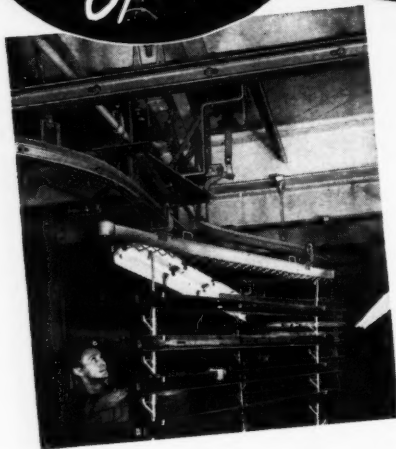




Carriers roll off power conveyor in finishing oven to cross-track switches for 90° transfer to shipping area.



Carriers descend through degreasing tank on power-operated chain conveyor



Solenoid operated switch automatically brings trolleys on parallel tracks into single track alignment.

A well-known metal partition manufacturer faced the problem of increasing production without enlarging building. New and better handling methods were obviously needed. They chose an American MonoRail overhead handling system as the best answer to increase capacity without increasing space and with less handling labor. Now, this American MonoRail system handles the steel components from receipt of raw materials, through finishing to shipping. The system boosted production, cut handling labor, improved space utilization, reduced material damage, bettered working conditions, and improved production control.

Let an American MonoRail engineer show you how it can be done in your plant.

**THE AMERICAN MONORAIL COMPANY**

13129 ATHENS AVENUE

CLEVELAND 7, OHIO

Circle No. 31 on Reader Service Card for more information

Bowers Battery & Spark Plug Co. points out that maximum loads can be stacked higher and faster when trucks are powered by Bowers batteries. Available are all the facts about lower initial cost and lower operating cost.

Circle No. 29 on Reader Service Card

Clark Equipment Company wants to prove there's a Clark industrial truck and tractor for every handling operation from receiving to shipping—each one engineered and built for long life and efficient operation.

Circle No. 40 on Reader Service Card

Circular 429 from Service Caster & Truck Corp. describes the Service Liftable, an elevating table which can be used to position dies, level work for press or mill, or in any other "liftable" applications.

Circle No. 81 on Reader Service Card

Manning, Maxwell & Moore, Inc., offers Bulletin No. 391, which includes the reasons why the Budgit electric hoist is industry's favorite lifting unit in the production of defense and civilian goods.

Circle No. 126 on Reader Service Card

A brochure from The Charles Wm. Doepke Mfg. Co., describes the Nestier System, including complete information on racks, trucks, conveyor hangers and inserts.

Circle No. 21 on Reader Service Card

With the Alvey unloading conveyor, drums can be unloaded from both box cars and gondola cars, according to Alvey Conveyor Mfg. Co. More information is available.

Circle No. 35 on Reader Service Card

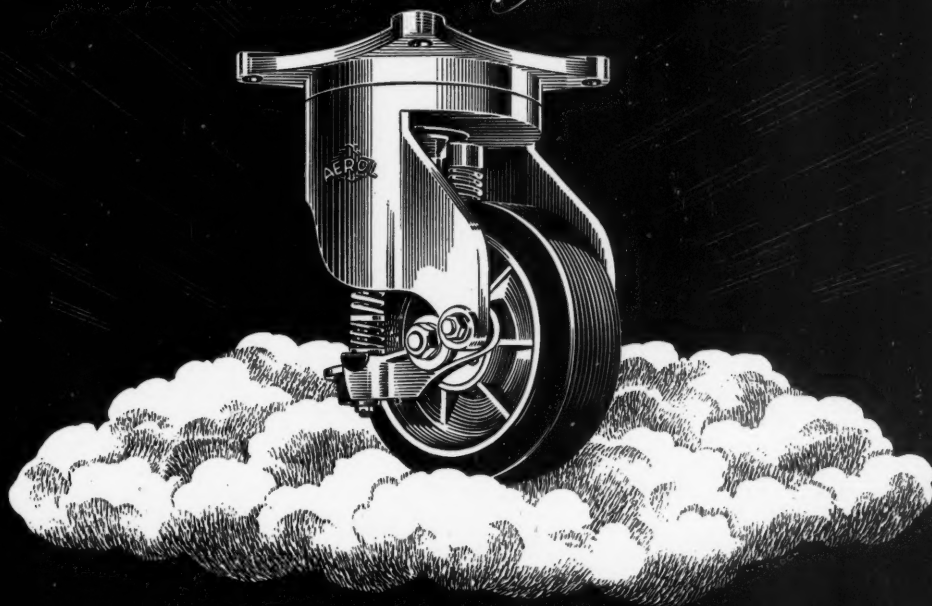
"The Picture Story of Yale Materials Handling Equipment" from The Yale & Towne Mfg. Co. tells the complete story of this company's industrial gas trucks, and how they can cut handling costs.

Circle No. 30 on Reader Service Card

The Buschman Trojan is an all-purpose powered conveyor for loading, unloading, stacking or boosting, and



*Aerol Proudly Presents:*



THE WORLD'S *finest* SHOCK-ABSORBING WHEEL AND CASTER

At last, here is a shock-absorbing wheel and caster that *actually* provides MAXIMUM shock absorption under any condition—even when truck or dolly is completely empty.

Aerol's new "AERFLO" knee-action unit is a completely trouble-free combination of light and heavy commercial standard springs. They will never unwind, fatigue or pop. Undue wear or breakage caused by "gyrating casters" is completely eliminated by the light spring which takes the stress when truck is empty or near empty—the heavy spring is for maximum or near maximum loads. Both springs can easily be replaced to convert unit to a different load capacity.

Available in the following sizes: 6" - 8" - 10" standard duty—10" x 12" heavy duty and 10" - 12" dual wheels—all Aerol-sealed and "lubricated for life"!

*Aerol wheels and casters are available at dealers throughout the United States and Canada...*

*Please consult your local telephone book for further information.*

NO WHEEL ROLLS  LIKE AN AEROL

**aerol**

**AEROL CO., INC., 2424 SAN FERNANDO RD., LOS ANGELES 65, CALIF.**

FLOW • AUGUST, 1952

Circle No. 32 on Reader Service Card for more information



## Do It Electrically

**E**lectric power, produced wholesale in a central station, is the lowest-cost power you can buy. EDISON Nickel-Iron-Alkaline Storage Batteries make it available to material-handling trucks with these important additional advantages: high-torque electric-motor drives . . . power instantly on and off for maximum efficiency in the inherently stop-and-go operation of material-handling trucks . . . quiet operation . . . no inflammable fuel . . . no odors or exhaust fumes . . . maximum availability.

EDISON Nickel-Iron-Alkaline Storage Batteries employ steel cell construction, an electrolyte which is a recognized preservative of steel and a foolproof electrochemical principle of operation. They are unequalled for durability, dependability, long life and operating economy. In combination with electric-motor drives, they insure the closest approach to failure-free

truck operation known. They are available in steel cradles and demountable steel boxes for ease in exchanging at convenient intervals for multiple-shift truck operation.

Because EDISON batteries are so widely known for high quality, many people think they are higher priced than they really are. Get prices on the capacities required by your trucks. By comparing this factor with their well-known long life, you will see why they are first choice of cost-conscious users. Send for free copy of our bulletin *Modern Material Handling*; describes the unit-load method of handling, the power requirements of material-handling trucks, and the characteristics of EDISON batteries; 28 pages; 8½x11; profusely illustrated. Edison Storage Battery Division of Thomas A. Edison, Incorporated, West Orange, N. J. Thomas A. Edison of Canada, Limited, Montreal.



YOU CAN ALWAYS RELY ON  
**EDISON**  
Nickel • Iron • Alkaline  
STORAGE BATTERIES

Circle No. 33 on Reader Service Card for more information

can be lowered or raised with one man "finger" control. Bulletin 50-A from The E. W. Buschman Co. gives complete details.

Circle No. 97 on Reader Service Card

Bulletin 750 from The Raymond Corporation gives all the facts on the Raymond low lift electric truck. This truck needs a minimum of working space, and is especially adaptable in tight quarters and narrow aisles.

Circle No. 22 on Reader Service Card

Complete specifications and illustrated folder on three heavy-duty Tracto-Lift industrial trucks are offered by Tracto-Lift Company. Lifting capacities range from 10,000 to 15,000 pounds on these models.

Circle No. 48 on Reader Service Card

The Wayne Pump Company points out that you can cut handling costs and speed loading with Wayne loading dock lifts. These custom-engineered lifts are described in the Wayne industrial lift booklet.

Circle No. 52 on Reader Service Card

You can save money in your shipping room when you use Gaylord boxes, according to Gaylord Container Corporation. Information from this company will show how Gaylord boxes assure faster, easier packing and shipping.

Circle No. 73 on Reader Service Card

"Why Industrial Tires Fail" is an informative folder from The Monarch Rubber Company. It points out that Monarch Mono-Cushion tires cushion shocks, are easy on loads, floors and drivers.

Circle No. 18 on Reader Service Card

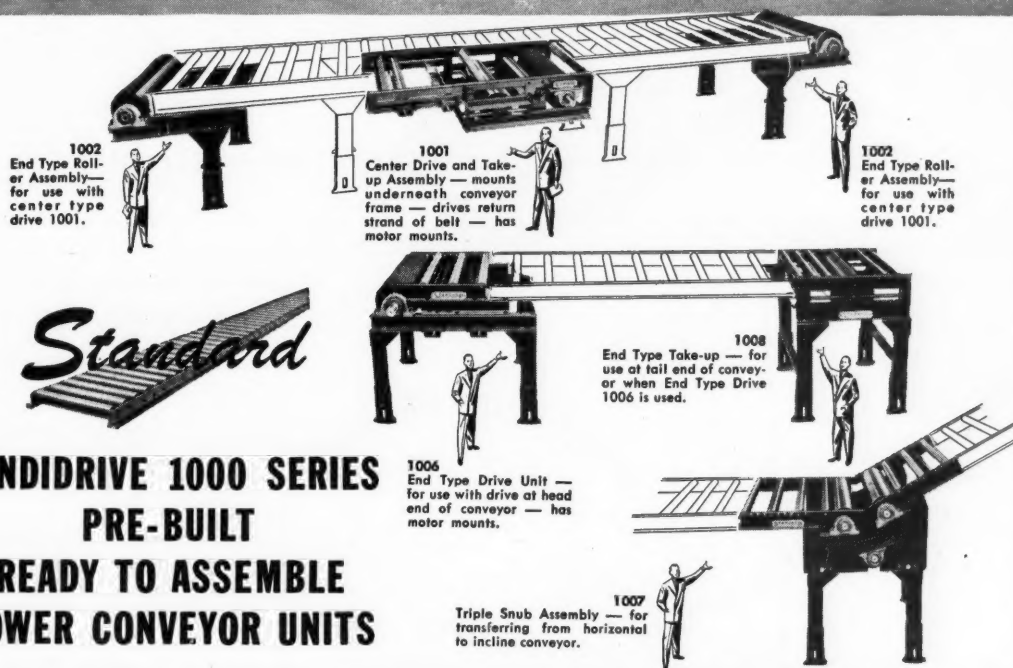
Details and floor plans from A-B-C Packaging Machine Corp. show how to save floor space and labor with the A-B-C short case sealer. These sealers are made in eight models to fit any production requirements.

Circle No. 69 on Reader Service Card

There's no end to the versatility of Elwell-Parker industrial trucks, according to The Elwell Parker Electric Co. A general catalog describes this line of trucks in detail.

Circle No. 5 on Reader Service Card

# A NEW, EXPANDED DEVELOPMENT IN CONVEYING EQUIPMENT...



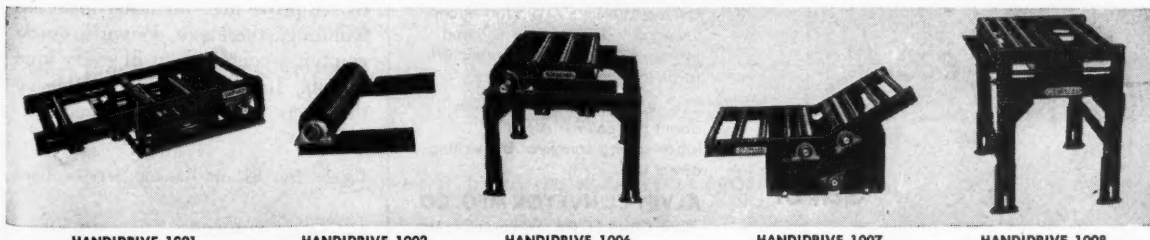
## NOW...It's easy to plan...Engineer-Assemble...At low cost... Your own "CUSTOM-BUILT" Power Conveyor System with Stock Units

Standard HANDIDRIVE Pre-Built, Ready-to-Assemble Power Conveyor Units make it a simple, easy matter to assemble a complete conveyor line — or put together stock unit parts to make additions or changes to present conveyors or convert existing belt or roller gravity conveyors to power conveyors.

No special engineering design or construction is required — just order the stock items you need from the HANDIDRIVE 1000 Series Pre-Built Units — drives, take-ups, end roller assemblies, triple snubs, intermediate frames, supports and hangers. The 1000 Series has capacity to pull

a 15,000 lb. total load on a belt conveyor 150 ft. long; available in five belt widths—14—18—24—30 and 36 inch. Also available in the HANDIDRIVE 400 Series for lighter loads not to exceed 400 lbs. pull; belt widths—10½—14½—16½—20½—and 26½ inch—between channel side rails.

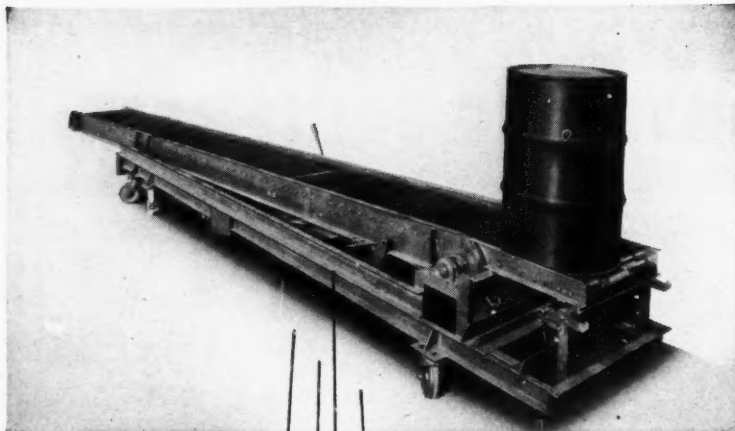
Send today for HANDIDRIVE 1000 Series bulletin and complete information on this new, low-cost, make-your-own power conveyor method. Describe commodity you want to handle — dimensions, weight, capacity and lbs. — pull of conveyor required. Complete conveyor engineering service is offered to you without obligation. Write Dept. FL-8-52



Write also for Bulletin 63B describing Standard Gravity and Power Conveyor Units. Address Dept. FL-8-52



**STANDARD CONVEYOR COMPANY**  
General Offices: North St. Paul 9, Minnesota  
Sales and Service in Principal Cities



**new ALVEY Unloading Conveyor**

**Unload Drums with Ease**

**faster**

**easier**

**safer**

Much of the hard work and risk of accidental injury has been taken out of the job of unloading drums from freight cars.

With the new Alvey unloading device, you can unload drums from both box cars and gondola cars. This unit is a portable conveyor 22 feet long that can be rolled into place, and put into operation in a few minutes' time.

Unloads box cars with the boom lowered — Boom is quickly and easily raised by an hydraulic lift for unloading gondola cars.

You can get more information about this newest Alvey labor-saving conveyor by writing direct to—

**ALVEY CONVEYOR MFG. CO.**  
9299 Olive St. Rd., St. Louis 24, Mo.  
BRANCH OFFICES IN PRINCIPAL CITIES



Circle No. 35 on Reader Service Card for more information

Comet Catalog No. 150 from Chisholm-Moore Hoist Corporation contains 18 pages of illustrated hoist information, including details on the two CM Comet electric chain hoists.

Circle No. 12 on Reader Service Card

"Quick Facts on Handling" is a booklet from Whiting Corporation, and it gives the complete story of Whiting equipment, including monorail systems, overhead cranes, electric chain hoists and car pullers.

Circle No. 51 on Reader Service Card

If bulk materials are a problem, a Lorain as crane, clamshell, dragline, shovel or hoe can handle the job, according to The Thew Shovel Co. Capacities range up to 45 tons—on crawlers or rubber tires—and full facts are available.

Circle No. 28 on Reader Service Card

Systemize battery care and get a good run for your money, says Gould-National Batteries, Inc. The Gould Plus-Performance Plan, a free system of battery insurance, may be able to increase the service life of your batteries as much as 50 per cent, according to the company, and they offer complete information.

Circle No. 1 on Reader Service Card

The Fairbanks Company states that hand trucks of special design required for many industries are run-of-the-mill stock items in the Fairbanks catalog, which is available.

Circle No. 54 on Reader Service Card

The Powell Pressed Steel Co. would like to prove that, for faster materials handling, there's a Powell quick-emptying container to fit every kind of job. Information is available on the many styles and types manufactured.

Circle No. 38 on Reader Service Card

Information from Sterling Wheelbarrow Co. points out that Sterling wheelbarrows are balanced for easy wheeling, and are equipped with a steel wheel or a wheel with zero pressure or pneumatic tire.

Circle No. 57 on Reader Service Card

(Turn to page 45)



# OSGOOD

## Mobilcranes speed materials handling

At busy ports where efficient materials handling is at a premium, OSGOOD Mobilcranes are winning enthusiastic praise for their speed, mobility and versatility. One typical report from an owner states that they have found OSGOOD Mobilcranes capable of performing jobs which they never believed possible with this type of equipment . . . that the potentialities of these machines are almost unlimited . . . and that they are very well satisfied with the performance. For one thing, they have found that OSGOOD Mobilcrane Model 725 can handle material almost three times as fast as the old steam gantry cranes, and with less man hours.

For loading and unloading barges and railroad cars . . . for handling scrap iron, cement containers, heavy shipments of all kinds . . . whatever your job for a crane, an OSGOOD Mobilcrane will do it better, faster and at lower cost. See OSGOOD before you buy. Write today.



EQUIPMENT DESIGNED WITH YOUR PROFIT IN MIND

### The OSGOOD COMPANY

MARION, OHIO

AFFILIATED WITH THE GENERAL EXCAVATOR CO.

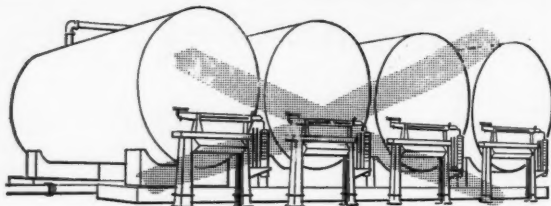
POWER SHOVELS, CRANES,  
DRAGLINES, CLAMSHELLS,  
PILE DRIVERS & HOES.  
CRAWLER, TRUCK OR WHEEL  
MOUNTED. DIESEL, GASOLINE  
OR ELECTRIC POWERED.  
CAPACITIES 1/2 TO 2 1/2 CU. YD.

Circle No. 36 on Reader Service Card for more information

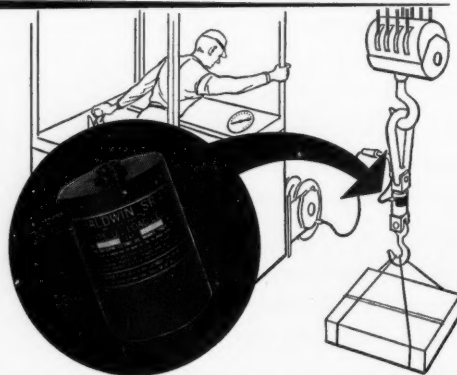
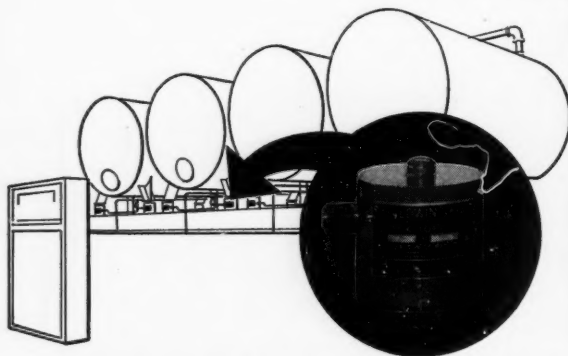
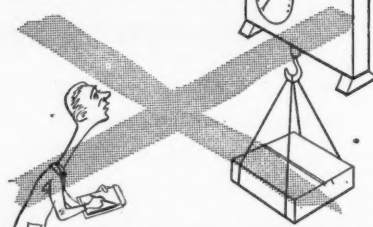
# SR-4<sup>®</sup> DEVICES

can solve these problems . . .  
and many others . . . for you!

## BATCH WEIGHING



## CRANE WEIGHING



Baldwin SR-4 Load Cells are rapidly replacing conventional lever, poise and knife-edge batch weighing systems because of greater efficiency and lower costs.

Cells may be located under existing supports, require minimum head-room and record without appreciable movement. Because they are completely sealed, cleaning is simplified and corrosion and deposits do not create any problem.

Unlike conventional weighing systems, the indicating, recording or control element may be placed at any desired location near or far. And only *one* indicating unit is required for as many tanks or hoppers as desired.

Mounting a Baldwin SR-4 Load Cell in a crane hook is the new way to speed weighing of bulk materials . . . speed the checking of platform scales. To make such a check just determine the weight of any bulky cargo on the portable electronic indicator, and compare with platform scale readings.

Use this crane scale, too, for batch weighing . . . for a limit alarm to avoid crane overloading . . . and for weighing truck and rail shipments.

**IT'S ECONOMICAL!  
SIMPLE! DEPENDABLE!  
ACCURATE!**



**HEART of all SR-4 measuring devices** is an SR-4 strain gage which consists of a postage-stamp-sized grid of very fine wire.

This grid is cemented to the inside of the SR-4 device or, in strain analysis work and other types of measuring, directly to the piece under test. Changes in the load applied to the testing device (or test piece) change the electrical resistance of the wires in the grid.

By using a simple potentiometer or a Baldwin SR-4 Wheatstone Bridge Control Box, minute changes in pressure, weight, torque, etc. can be determined easily, inexpensively and with unusual accuracy.

Free from moving parts, simple, rugged, durable, inexpensive, these Baldwin SR-4 Load Cells are ideal for solving many weighing problems.

If you have any measurement problem, it will pay you to investigate the unusual advantages of SR-4 strain gages and measuring devices.



# BALDWIN-LIMA-HAMILTON

## TESTING HEADQUARTERS

BALDWIN-LIMA-HAMILTON CORPORATION

Eddystone Division • Philadelphia 42, Pa.

In Canada: Peacock Bros., Ltd., Montreal, Quebec

Circle No. 37 on Reader Service Card for more information

# For Faster Materials Handling . . .



There's a **POWELL** Quick Emptying



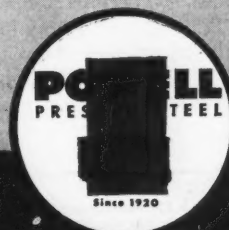
## Container To Fit Every Kind of Job

You can't beat quick emptying containers if you want faster materials handling . . . and you can't beat Powell when it comes to quick emptying containers. Pictured here are only a few of the many styles and types of quick emptying containers designed and built by Powell.

If this page gives you an idea for the speedier handling of your product, get in touch with the Powell representative in your area or write direct. Powell designs exactly what you need.

**THE POWELL PRESSED STEEL CO., HUBBARD, OHIO**

ORIGINATORS OF ALL STEEL COLD FORMED MATERIALS HANDLING EQUIPMENT  
(In Greater Youngstown)



Dept. 282

Circle No. 38 on Reader Service Card for more information





# World's strongest tape?

It holds corrugated aluminum sheets in compact bundles for safe shipping at Kaiser Aluminum Co., Spokane, Wash.



**ONLY SHORT STRIPS** of "Scotch" Brand Filament Tape are needed to bundle huge aluminum sheets for shipping at Kaiser Aluminum Co., Spokane, Washington! This super-strong tape conforms to corrugations, too, never scratches or mars soft metal. And unlike conventional strapping materials, *tape* permits compact "nesting" of bundles into uniform stacks.

Try "Scotch" Brand Filament Tape yourself! See how it sticks to the job right off the roll—how it resists terrific strains and impact shocks without breaking. No special applying equipment required.

Your supplier has many widths and colors. Put in your order today!



The term "Scotch" and the plaid design are registered trademarks for the more than 200 pressure-sensitive adhesive tapes made in U.S.A. by Minnesota Mining & Mfg. Co., St. Paul 6, Minn.—also makers of "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: 122 E. 42nd St., New York 17, N. Y. In Canada: London, Ont., Can.

Circle No. 39 on Reader Service Card for more information



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les  
sh.

Complete specifications on the Mobilift 6-10 fork truck are available from Mobilift Corporation. The 6-10 offers a six-foot clearance, and virtually a ten foot lift. Capacities range from 2000 to 3500 pounds.

Circle No. 19 on Reader Service Card

The National Safe-Line Clamp Corp. offers information on the Safe-Line wire rope clamp, which is said to be safe because double splines grip each wire strand without cutting action and with a pressure that cannot slip.

Circle No. 80 on Reader Service Card

A catalog from May-Fran Engineering, Inc. describes this company's hinged-steel conveyor belting, which can be furnished in practically any width or length. It is available in 2½, 4, 6, 9 and 12-inch pitch lengths with solid or perforated links.

Circle No. 107 on Reader Service Card

Let the figures prove how much more you save with "keyed-for-the-job" electric trucks, says Automatic Transportation Co. The facts on these trucks are available.

Circle No. 2 on Reader Service Card

General Electric Co. offers information on battery-charger selection that will eliminate guesswork. Included are facts on how to get equipment that will do the job dependably and economically, assurance of not buying more elaborate equipment than is needed, and advice and suggestions for making the most efficient use of the equipment selected.

Circle No. 20 on Reader Service Card

Signode Steel Strapping Company points out that Signode retaining strips reduce damage at car doorways, permit solid doorway loading and can be easily and speedily erected. Literature describes these doorway barriers and their uses.

Circle No. 74 on Reader Service Card

Illustrated bulletins from Rowe Methods, Inc., shows typical installations of Rowe Adjust-A-Docks, which raise or lower to meet the level of any carrier.

Circle No. 83 on Reader Service Card

(Turn the page)

# CLARK EQUIPMENT

## CRACKS DOWN on costs all along the line -

Here's efficiency . . . loads of it.

Whether one item constitutes a load; whether several items are combined to make a unit load, or whether, as in the case of most materials, they can be assembled into a palletized load . . . here's the modern method of handling it.

From receiving to shipping . . . all along the line . . . Clark equipment puts materials handling on a "save-as-you-go" basis. Clark Fork Trucks lift, carry, tier anything in cartons, barrels, bags, boxes, crates or drums. They stack unit loads to ceiling height . . . easily . . . effortlessly . . . multiplying your storage space without adding to your costs. Materials, parts, finished products are moved from one operation to another without delay . . . and with a minimum of manpower. And the extra expense items of demurrage, accident and damage losses show a remarkable reduction when Clark equipment is on the job.

There's a Clark unit for every handling operation from receiving to shipping . . . each one engineered and built for long life and efficient operation. Let us show you how they can improve your operation and crack down on costs.

## CLARK ELECTRIC AND GAS POWERED FORK TRUCKS AND POWERED HAND TRUCKS • INDUSTRIAL TOWING TRACTORS



INDUSTRIAL TRUCK DIVISION • CLARK EQUIPMENT COMPANY • BATTLE CREEK 13, MICHIGAN  
Please send: ☐ Material Handling News ☐ Basic Facts ☐ Movie Digest  
☐ Have Representative Call

Name \_\_\_\_\_  
Firm Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS

Circle No. 40 on Reader Service Card for more information

a Mining  
"Safety-  
nt., Can.

FLOW

# Do You Know What You Want?

BEFORE YOU SPECIFY . . . .

LET INDUSTRY'S "MOST USED BOOK"  
SERVE YOU AS A REFERENCE  
AND ENGINEERING GUIDE FOR  
MATERIAL HANDLING EQUIPMENT



## THE NEW 1952-53 FLOW DIRECTORY . . .

Wherever materials are handled, the FLOW DIRECTORY is the authoritative source of information on material handling equipment. In addition to hundreds of engineering charts and tables which it contains, it classifies and describes every kind of material handling equipment. It helps you to select the equipment you need, and tells you where to buy it. Known and used throughout the world.

Find the information you need in one of these six completely indexed sections:

- Equipment and Manufacturers
- Trade Name Index
- Manufacturers' Outlets
- Engineering and Technical Data
- Manufacturers' Catalogs
- Who Sells Equipment

Flow Directory  
1240 Ontario St.  
Cleveland 13, Ohio

Please send me.....copy(ies) of the new 1952-53 FLOW  
DIRECTORY OF MATERIAL HANDLING EQUIPMENT, MA-  
CHINERY & ACCESSORIES at the price of \$6.50 per copy.

Name .....  
Title .....  
Company .....  
Street .....  
City ..... Zone ..... State .....

Circle No. 41 on Reader Service Card for more information

There's a Yale hoist for every lifting need, according to The Yale & Towne Mfg. Co., and information to back up this claim is available. Details on the Yale Pul-Lift, a ratchet-type hoist made in capacities to 15 tons, are included.

Circle No. 17 on Reader Service Card

Phillips Mine and Mill Supply Company offers Bulletin E-1A, which describes the Phil Dump Junior. With its capacity of one-half cubic yard, this handler features a self-dumping hopper which returns and locks in the loading position after it has been emptied.

Circle No. 127 on Reader Service Card

Data on the Rectox battery charger is contained in a copy of DB-19-040, available from Westinghouse Electric Corporation. These units charge either lead-acid or nickel-alkaline-type batteries.

Circle No. 4 on Reader Service Card

Whatever your particular industrial tire problem, technical engineering advice and service is offered by The Goodyear Tire and Rubber Co., plus information on the complete line of Goodyear tires.

Circle No. 9 on Reader Service Card

If you have a packing problem, and if you want to cut packing and shipping costs, General Box Company would like to hear from you. "The General Box" is a booklet which will show you how to cut container costs.

Circle No. 63 on Reader Service Card

Your materials handling can be made as efficient as your production with Kennett materials handling equipment, according to Fibre Specialty Manufacturing Company. Complete catalog from this company includes trucks, trays and tote boxes for all purposes.

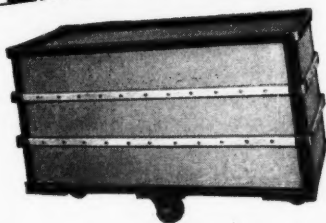
Circle No. 42 on Reader Service Card

(Turn to page 109)



*Your Materials Handling can be made  
as efficient as your production*

with **KENNETT**  
**Materials Handling  
Equipment**



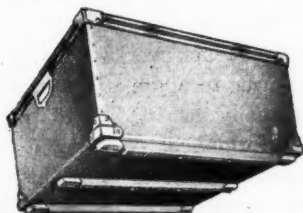
**TRUCKS FOR EVERY PURPOSE**

Made to order any size. Available in hard vulcanized fibre, resin bonded plywood veneered with hard vulcanized fibre, or from steel veneered to both sides of water proof core.



**TRAYS FOR EVERY PURPOSE**

Made in any type and size from hard vulcanized fibre, also from "Fiberglas" Reinforced plastic (various colors) for stacking or nesting. Light, strong, inexpensive.



**TOTE BOXES FOR EVERY PURPOSE**

Available in any type and size to your specifications. Made from hard vulcanized fibre or "steel-klad" fibre. Weight reduced to minimum without loss of strength.

**W**e can make this statement because for over 50 years our exclusive job has been the design and construction of specialized handling equipment to do certain things under certain conditions—efficiently—economically!

If your handling equipment is obsolete or inadequate at any point, you're facing needless labor costs. By analyzing such problems you can enjoy extra savings—increased profits.

Our engineers, skilled in materials handling problems, located in principal cities, are available to study your particular situation and to make recommendations for the right equipment, designed and built for the specific purpose.

If you have a materials handling problem, let us hear from you. Use the coupon below for quick action.

**FIBRE SPECIALTY MANUFACTURING COMPANY**

**Kennett Square, Pennsylvania**

Fibre Specialty Manufacturing Co.  
Kennett Square, Pennsylvania

We are interested in reducing handling costs

- ☐ Have your representative call  
☐ Send your complete Catalog

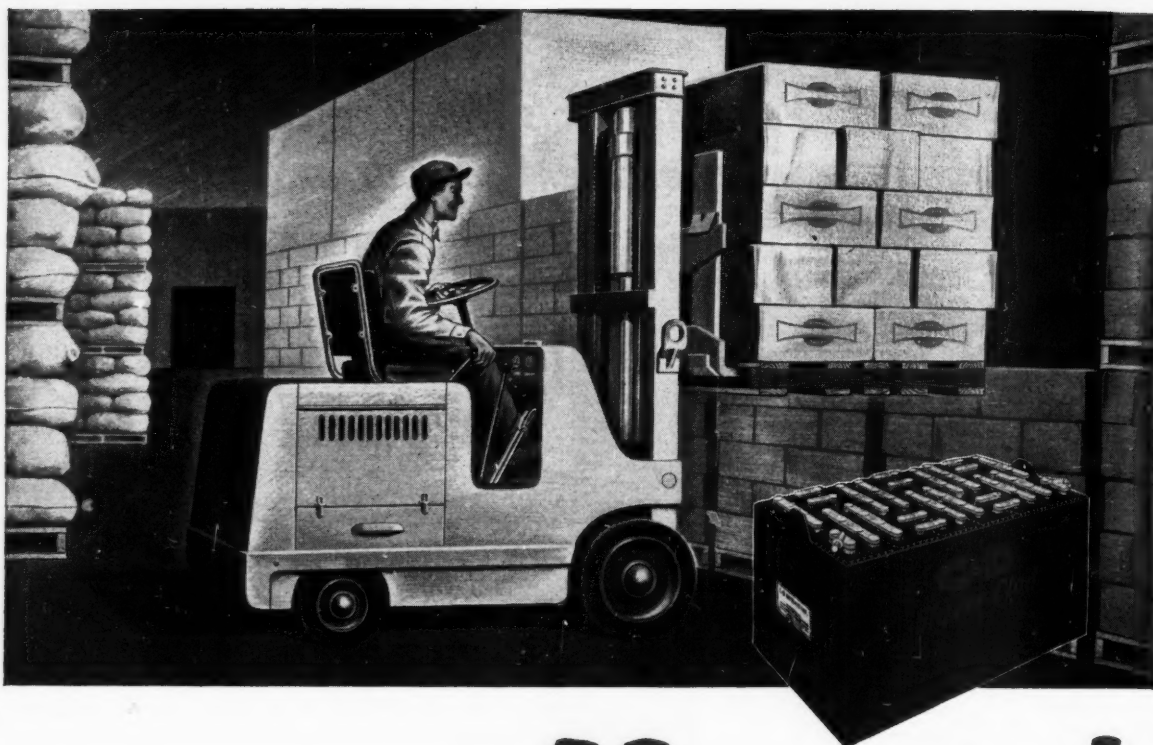
Firm Name \_\_\_\_\_

Address \_\_\_\_\_

by \_\_\_\_\_

**THE HIDDEN COST OF MATERIALS HANDLING CAN BE THE DIFFERENCE BETWEEN PROFIT AND LOSS**

Circle No. 42 on Reader Service Card for more information



Your trucks can do **More work each day**  
with  
**C&D Slyver-Clad<sup>®</sup> batteries**  
Trade Mark Reg. U. S. Pat. Off.

**C&D**

**BATTERIES, INC.**

OF CONSHOHOCKEN, PA.  
(In the Philadelphia Area)

**SALES AND SERVICE**

Boston, New York, Philadelphia, Syracuse, Buffalo, Pittsburgh, Washington, Atlanta, Jacksonville, New Orleans, Cleveland, Detroit, Chicago, St. Louis, Minneapolis, Dallas, Denver, San Francisco, Los Angeles, Portland, Seattle

● Yes, actual user-results confirm C&D's claim that SLYVER-CLAD batteries deliver up to 20% more power, last as much as 35% longer! That means more work per day—every day! A C&D-powered truck works right up to the end of each shift with power to spare—lifts heavy loads and climbs inclines as easily as it did at the shift's beginning. That's real performance!

The secret of these super batteries is in their longer, heavier plates... made possible by C&D's *exclusive* Five-Fold SLYVER-CLAD method of plate insulation and retention. To learn more about the inner workings of these power-packed batteries—and how they can help boost production in *your* plant—send for C&D's SLYVER-CLAD battery folder. It's free; write today!

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# Put The Unused Ceilings To Work....

MANY plants have found that by handling goods via overhead equipment they have (1) reduced congestion, (2) gained additional floor area by narrowing aisles, and (3) speeded material flow. While overhead handling is no cure-all for all problems, it may well be that the installation of overhead equipment or a combination system with overhead equipment working with rolling stock or waist-height conveyors can result in some tangible benefits.

## What Equipment Do You Use

There are four basic types of equipment for handling overhead:

(1) Traveling bridge cranes which are used principally for long moves within a fixed area such as a production bay, yard area, shipping or receiving department, etc. They are capable of very heavy lifts.

(2) Monorail systems which serve as a roadway for

trains of loads (propelled manually, by electrically or battery-powered tractors), or in short lengths as suspension points for hoists. Thus, monorail systems can link work stations, departments, scattered yard areas, or serve individual work stations.

(3) Conveyors of many types which may be installed to operate overhead to conserve floor area. Overhead trolley chain and cable conveyors are expressly designed to move goods over long and short distances, often into ovens, paint booths, etc., where it would be difficult to handle goods by other means. Sometimes, belt, slat, gravity wheel and roller, and other types of conveyors are designed to travel over crowded working areas.

(4) Hoists, as stated previously, are employed to move goods in a vertical plane. They may be installed at work stations for positioning and spotting, are often used as a part of monorail systems, and of course, are always built into traveling bridge cranes.

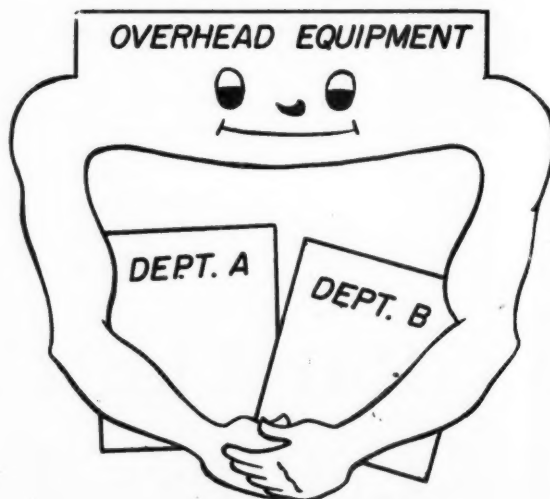
**20 EXAMPLES OF OVERHEAD  
HANDLING ARE ON THE NEXT 6 PAGES**



## Common Uses For Overhead Equipment:



**USING OVERHEAD HANDLING EQUIPMENT FOR SHIPPING AND RECEIVING:** When you're loading and unloading from open-top highway trucks and rail cars, overhead handling equipment can speed your job, often transfer direct to storage or production inside the plant.

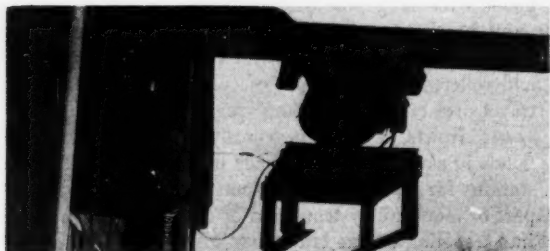


**USING OVERHEAD HANDLING EQUIPMENT FOR MATERIAL FLOW BETWEEN DEPARTMENTS:** Many plants use cranes, conveyors, etc., for handling between scattered departments. Often it's possible to design overhead installation to permit "temporary storage 'enroute'".

## Overhead Equipment During Receiving and Shipping



**AT A RAILROAD SIDING,** this swinging jib crane is being moved out of the way of an incoming freight car. Note that this crane will join the end of the plant's monorail system, shown at extreme top left.

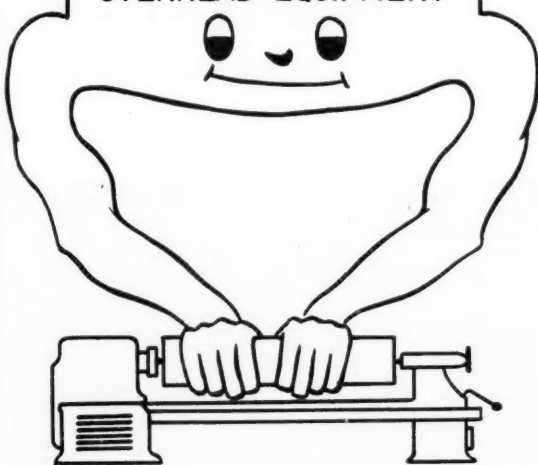


**JIB CRANE IS IN PLACE** to receive hoist-controlled grab that will unload sheet steel from the incoming carrier. Raising and lowering is controlled by the operator. Goods will be moved directly to the plant.



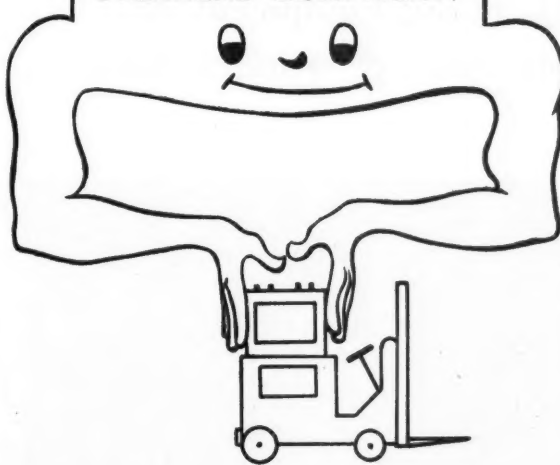
**LOADING AND UNLOADING** heavy loads (such as this transformer) is easily accomplished by this two-ton hoist which has moved the load from an adjacent storage area to closest point to the outgoing carrier.

## OVERHEAD EQUIPMENT

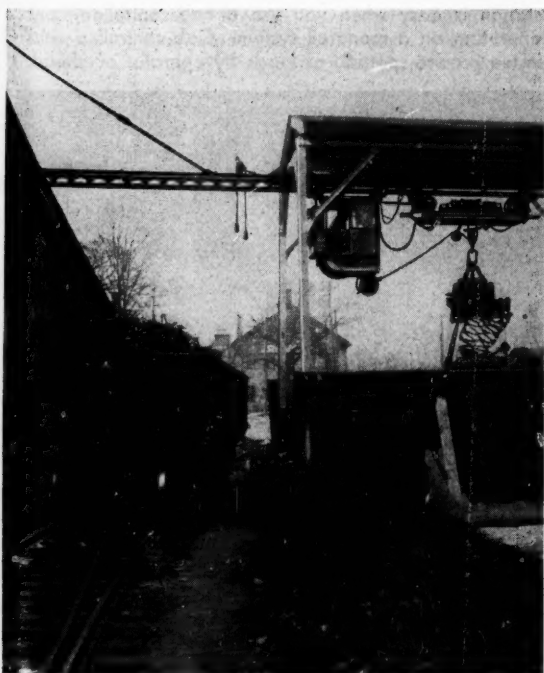


**USING OVERHEAD HANDLING EQUIPMENT AT WORK STATIONS:** Hoists suspended from monorail track or sections of I-beam can be located above work stations for precise spotting of in-process work, dies, fixtures, machine parts, etc. Hoists spot loads in storage, too.

## OVERHEAD EQUIPMENT



**USING OVERHEAD HANDLING EQUIPMENT FOR MAINTENANCE TASKS:** For example, during placing and removing batteries from industrial trucks, raising portions of other equipment for maintenance tasks, removing sections of machine tools for inspection or repair.



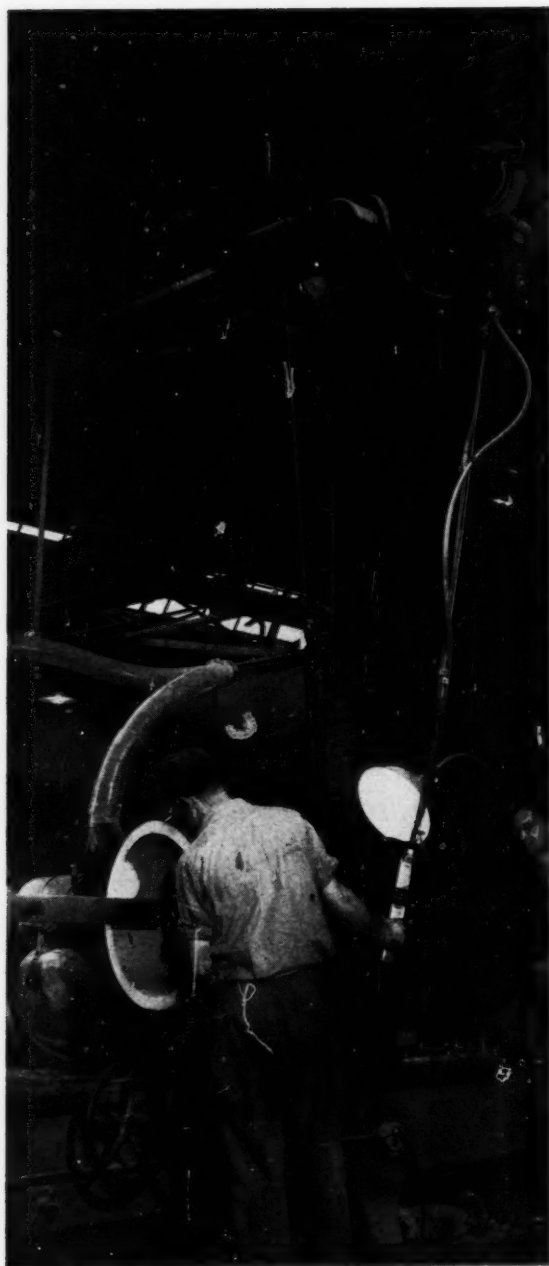
**LOADING OUTGOING SCRAP** is the job of this cab-controlled hoist, operating on a monorail system. The hoist, equipped with a magnet, moves scrap directly from the plant to bins in the yard; also to the car.



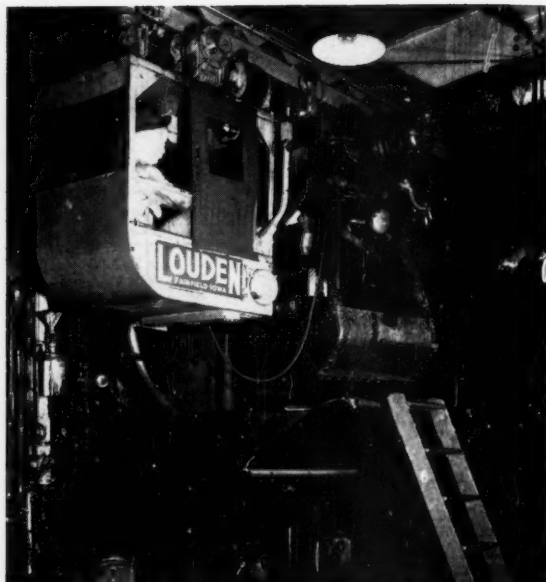
**LOADS FOR EXPORT** are carried by this cab-controlled hoist directly from second-floor packaging to flat cars on an adjacent rail siding. The hoist travels on the monorail out an opening from the second floor.

such as  
two-ton  
ent stor-  
carrier.

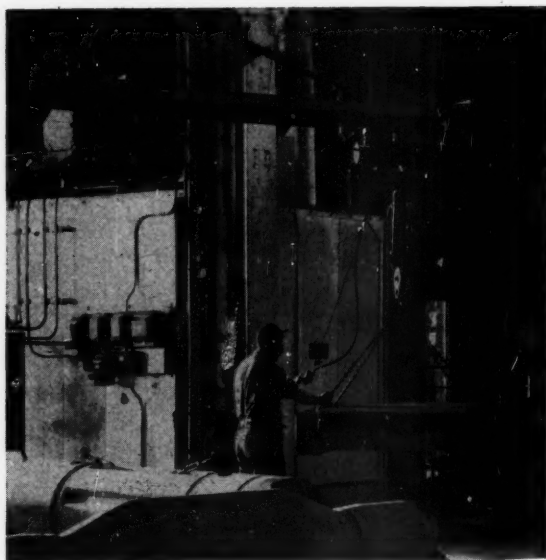
## How To Use Overhead Handling Equipment At Machines & Work Stations...



**POSITIONING AT MACHINES** is required of this monorail crane. The overhead equipment picks up a load at a previous work station, brings to operators, shown. Lowering is controlled by operator, is very precise.



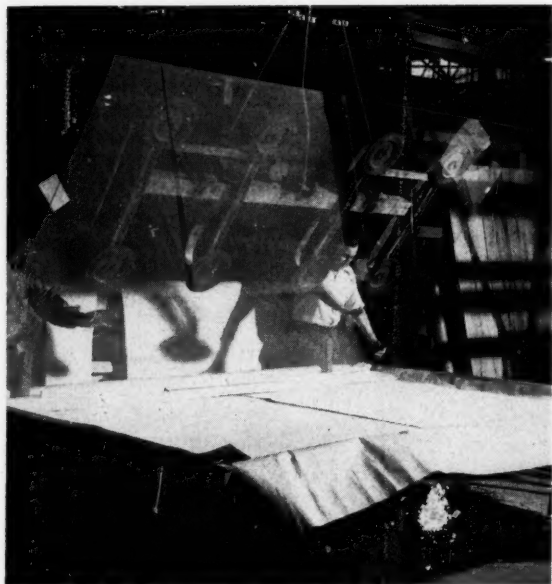
**HANDLING BULK MATERIAL** from storage to a work station is easy when you use a cab-controlled hoist operating on a monorail system. Cab-controlled units insure precise spotting of loads by operator overhead.



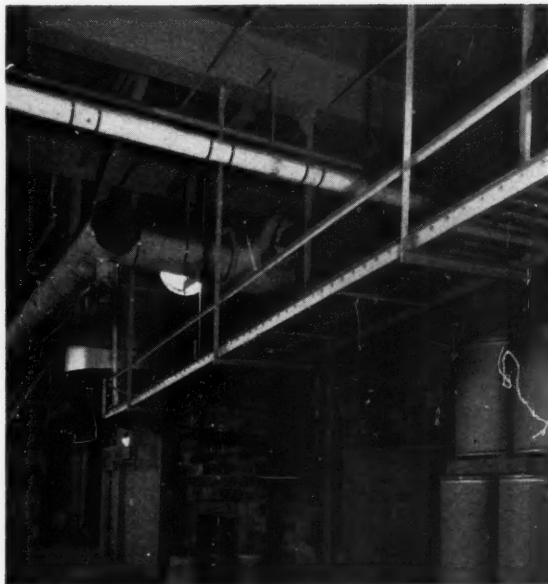
**JIB CRANES PERMIT PRECISE SPOTTING** in confined work areas. The horizontal (arrow) rotates on its vertical post (not shown) to cover as much as 360°. Hoists travel back and forth along horizontal member.



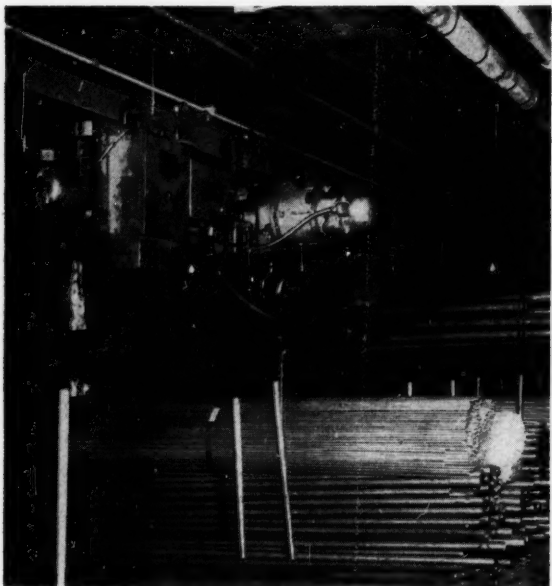
## How To Use Overhead Handling Equipment For Inter-Departmental Flow...



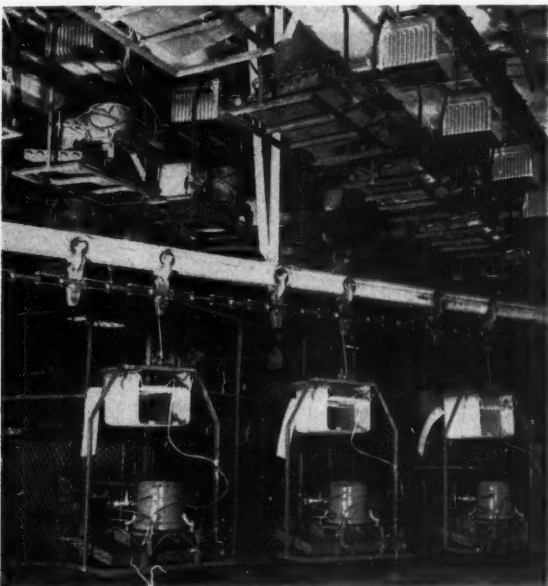
**IF YOU HANDLE FRAGILE LOADS**, perhaps you can use an idea like this. An overhead bridge crane has been equipped with suction cups to securely hold plate glass. Suction is controlled from the crane cab.



**FOR INTER-DEPARTMENTAL FLOW**, this company installed roller conveyors which receive from other carriers on upper floors, convey by gravity under the ceiling eventually lower the loads to the shipping area.

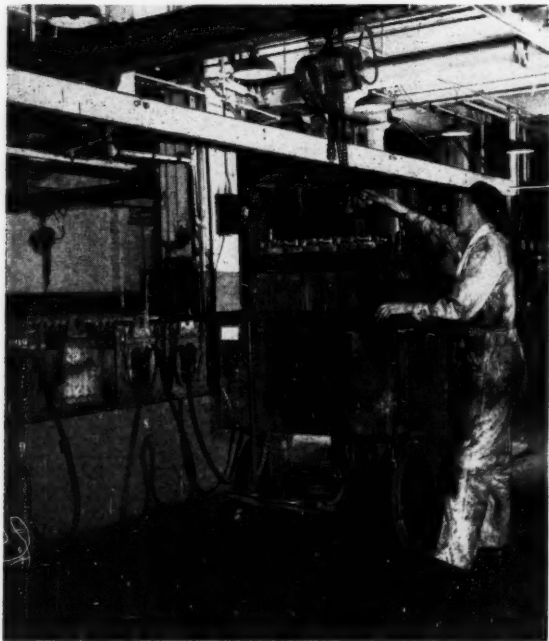


**CONNECTING RECEIVING AND STORAGE** is possible when you use a tractor-powered hoist on a monorail system. At Stewart-Warner Corp., Chicago, such equipment moves bar stock from carriers to racks.

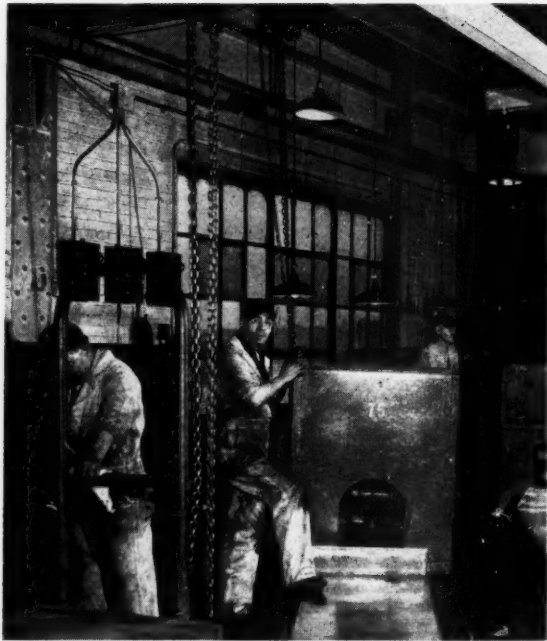


**STORAGE EN ROUTE** can be real space saver and allows a floating bank of materials and assemblies. Note that conveyors under the ceiling snake back and forth to conserve time reaching the next department.

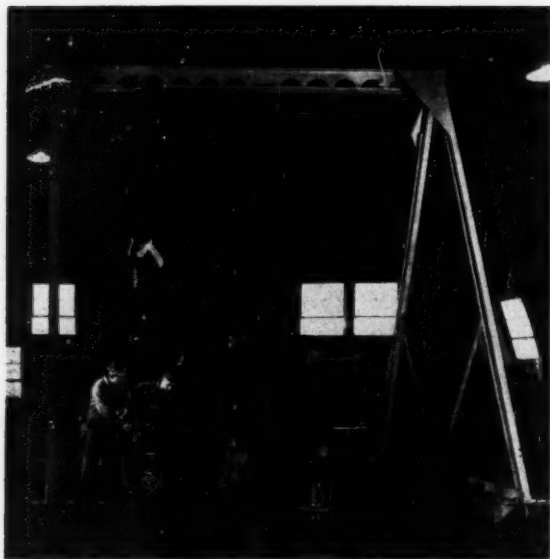
## Using Overhead Equipment For Various Maintenance Jobs Around The Plant...



**EVEN IN THE MAINTENANCE DEPARTMENT,** overhead equipment performs valuable service. Here, an operator, with the aid of an overhead crane, lifts out a heavy industrial battery prior to charging operations.



**OTHER MAINTENANCE JOBS** performed by overhead equipment include overhaul of industrial trucks, etc. Heavy assemblies are easily hoisted and spotted eliminating former arduous physical handling.

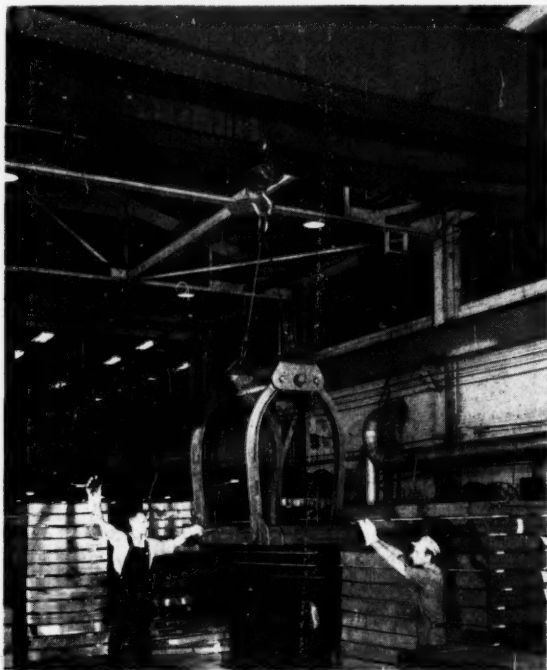


**PORTABILITY DURING MAINTENANCE** is possible by using a portable gantry crane such as the one shown at the Timken Roller Bearing Co., Canton, Ohio. The crane is easily moved about the maintenance hut.

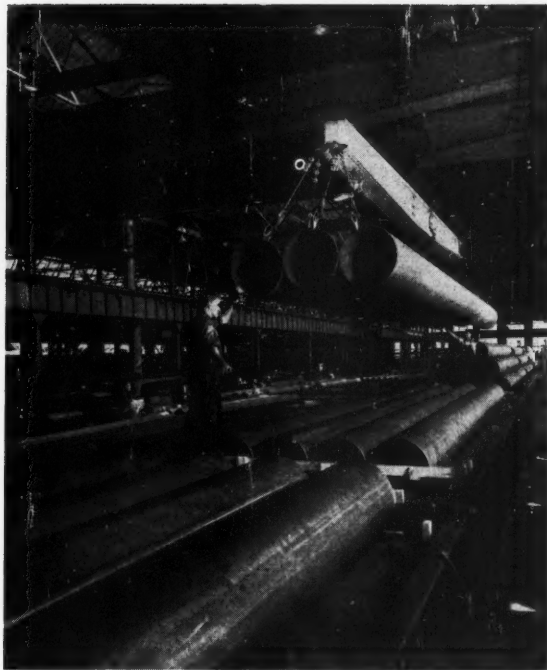


**DOUBLE-DUTY FOR OVERHEAD EQUIPMENT.** At the Cadillac Tank Plant, Cleveland, a monorail system which is designed to completely cover the entire production area is also used to change lights in ceiling.

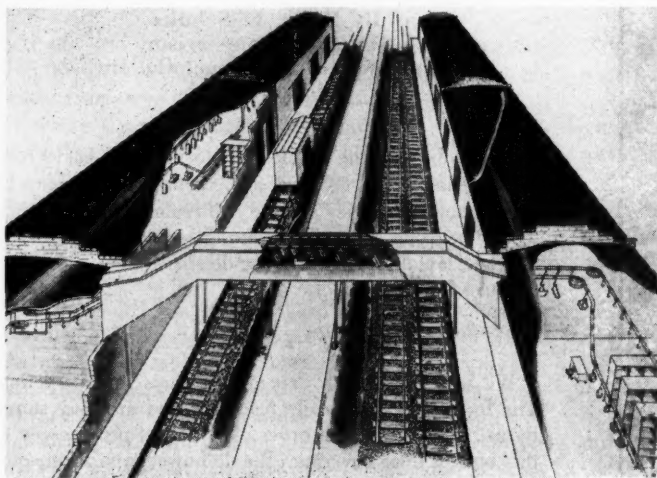
## Additional Applications For Overhead Equipment -- During Storage & Shipping ...



**WHEN LIFTING HEAVY TONNAGES**, a traveling bridge crane (with capacities up to 200 tons) can be used to cover a wide area. Here, the crane, equipped with a sheet grab, is handling loads of steel.



**ODD-SHAPED LOADS** are also easily handled overhead as shown at the A. O. Smith Corp., Milwaukee. Large diameter welded steel pipe is moved, three or more at a time, by a crane to outgoing gondola cars.



**THIS 2000-FT. CHAIN CONVEYOR** connects a group of warehouses at an Ohio Air Force installation. Features: continuous flow between buildings, no interruption of normal on-the-floor traffic.

## Buildings Linked With Overhead Conveyor

This overhead chain conveyor system, used to supply goods to and from any one warehouse to a central receiving bay, has been installed by the 831st Air Force Specialized Depot, Shelby, Ohio.

The effectiveness of the system is dramatized by the number of uniforms which were shipped to airmen in a recent two-day period. In that period, approximately 60,000 uniforms, or the equivalent of 27 carloads were shipped. Without the conveyor, it would have required a week or more to do the job.

The conveyor's main function, of course, is to bridge the various buildings in a smooth, continuous flow. Rail spurs running between the buildings present no problem, likewise, floor traffic within the buildings is not disturbed.



**FIGURE 1: UNLOADING "ROOM-SIZE" RUGS.** Rolls are removed from incoming rail cars onto stake trucks. Dollies are also used. The loads are easily moved to storage locations. Carpeting is unloaded similarly.



**FIGURE 2: STORAGE OF "ROOM-SIZE" RUGS.** Rolls are transferred from intermediate carriers and stored vertically against pin racks. Some rugs are stored horizontally. All are shipped without processing.

### HANDLING OVERHEAD Case Study No. 1

#### *Editors Note . . .*

Here's a system that offers peak efficiency when handling and storing from overhead. While the product in this case study is carpeting, similar installations are already in use handling cellophane (see *FLOW* March, 1950 at E. I. duPont deNemours & Co., Inc.), palletized merchandise, bar stock and pipe, automobile bodies, photograph film, and others.

## Put Your Ceiling To

# Stacking

By Henry L. Schultz  
Warehouse Supervisor  
Bigelow-Sanford Carpet Co. Inc.  
Chicago, Illinois

We have solved the problem of storing long, heavy rolls of carpeting (9' x 18', 350 to 800 in.) so they may be easily handled, quickly stacked and removed. In addition, we are utilizing all available storage space both vertically and horizontally. Here are the details.

#### Movement to Storage

We warehouse both "room-size" rugs and carpeting. The former arrive already packaged and are only stored by us, then shipped on order. We do not process any of this type of floor covering. We do however perform some operations on the carpeting. This is received and stored in large rolls, is either shipped as such, if so ordered, or moved to our cutting department sized, cut, bound, etc. Our dock facilities permit us to unload from three 50'





**FIGURE 3: STORAGE OF CARPETING.** Rolls are moved via castered equipment to main storage area. Monorail crane, equipped with vertical post and forks, remove loads from trucks, transport them to stacks.



**FIGURE 4: HANDLING IN STORAGE.** Two stacker cranes with 35' spans, take care of 72' x 350' storage area. Post revolves 360° to serve both sides of an aisle. Rolls are stacked 17 ft. high in 48" aisles.

Work When . . .

## In Narrow Aisles

box cars and seven trailers or highway trucks at one time (see Figure 1), "Room-size" rugs are moved by castered trucks from these incoming carriers to storage and stacked vertically against pin racks (see Figure 2). Other racks store these loads horizontally to a height of six ft.

Carpeting is unloaded on dollies or stake trucks and rolled to the main storage area which is 72' wide x 350' long and 16' high. Approximately 1900 to 2000 units can be stored in this location.

The equipment that serves this area consists of a vertical post suspended from an overhead monorail crane. Hoist operated arms (forks) on the post are raised during travel and positioned at the same height as (arms) on the vertical storage racks (see Figures 3 & 4). In this way, rolls of carpeting are easily pushed off onto the racks.

The overhead equipment picks off the loads direct from the intermediate carriers; the rolls are then moved to the desired storage location. The forks are designed to revolve a full 360° to work either side of an aisle.

Wooden decks jutting out from the racks (which hold the rolls during storage) have to be spanned by the crane

forks. For this reason, these forks can be regulated in a horizontal plane.

We have two cranes with one-ton capacities and 35' spans each. We are able to store with only 48"-wide aisles and are able to stack to a height of 17 ft.

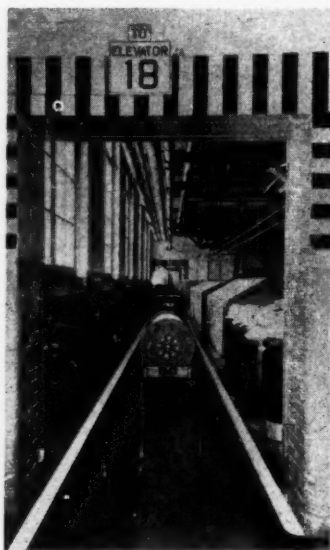
When goods are needed in the cutting room, they are respoited on stake trucks or dollies and so transported. Oftentimes, a portable elevator is used for spotting the heavy rolls in subsequent operations.

### Features Of The System

The present system offers many advantages over former methods in our previous warehouse. In brief, these are:

1. Maximum use of floor and vertical area by handling in 48" aisles with the stacker crane.
2. Good housekeeping in our plant—working area and storage area are spotlessly clean.
3. Easy inventory control because units in a storage are easily and quickly identified.
4. No physical effort—little chance of accidents.
5. No crushing of carpeting—maximum product protection.

## Here Are Some Do's And Some Don't's



**DO — OUTLINE TRAVELWAYS** for in-plant trailer-trains. Use contrasting paint to emphasize overhead obstructions, such as pipes and doorways. This photo courtesy POM-Werner Textile Consultants.



**DO — CARRY MAXIMUM LOADS AT MEDIUM HEIGHT** to reduce torque loading on fork truck. Maximum loads at high lift tend to reduce maneuverability as well as necessary stability.



**DON'T — PERMIT YOUR ROADWAYS TO DETERIORATE.** Drive the truck around obstacles or obstructions, (arrow), not over them. Spilled loads and personnel injury are possible results.

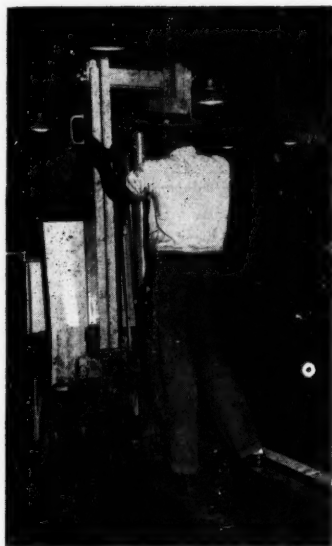
## Recommended Procedures

By O. T. Henkle, Jr.  
Vice-President  
Mercury Manufacturing Company  
Chicago, Illinois

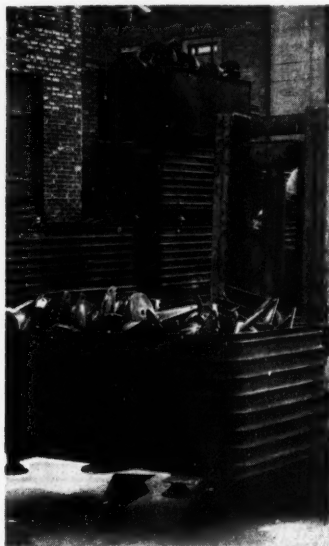
**This Survey Details:**  
Proper Use of Equipment,  
Proper Loading of Equipment,  
Proper Movement of Loads,  
and General Safety Precautions . . .  
All Fork Truck Operators  
Should Read This Article

Everything is engineered into a fork truck except the skill and expertness of those responsible for its efficient operation. Operator judgement is as important as good truck design, material and workmanship. In some ways it is more important, because lack of proper judgement can result in considerable property damage, severe injuries or even loss of life. Tons of material, possessing an enormous amount of kinetic energy are being handled whenever a fork truck is in operation. This force must always be carefully controlled if operating and mainte-

## ont's For Your Fork Truck Operators . . .



**DON'T—USE THE FORK TRUCK FOR A TAXI OR ELEVATOR.** One man is all that is supposed to ride a fork truck. Operators should be warned against taking these chances.



**DON'T—PICK UP LOADS WITH THE FORKS OFF CENTER.** This places undue stress on the fork truck and may result in spilled loads, equipment damage or possible injury to personnel.



**DON'T—OBSTRUCT THE OPERATOR'S VIEW.** This load is carried so that it prevents the operator from seeing where he is going. If necessary, travel backwards for complete safety.

## res For Fork Truck Operators

nance costs are to be kept at a minimum.

The following rules are designed to aid fork truck operators in more economical and safer material handling operations. These general rules may be classified as: (a) Proper Use of Equipment; (b) Proper Loading of Equipment; (c) Proper Movement of Loads, and (d) General Safety Precautions.

### Proper Use of Equipment

The primary rule in proper use of equipment is to permit only qualified operators to drive the fork truck. Whenever the truck is left idle, the key should be removed from the cut-out switch. This will render the truck inoperative and prevent unauthorized use.

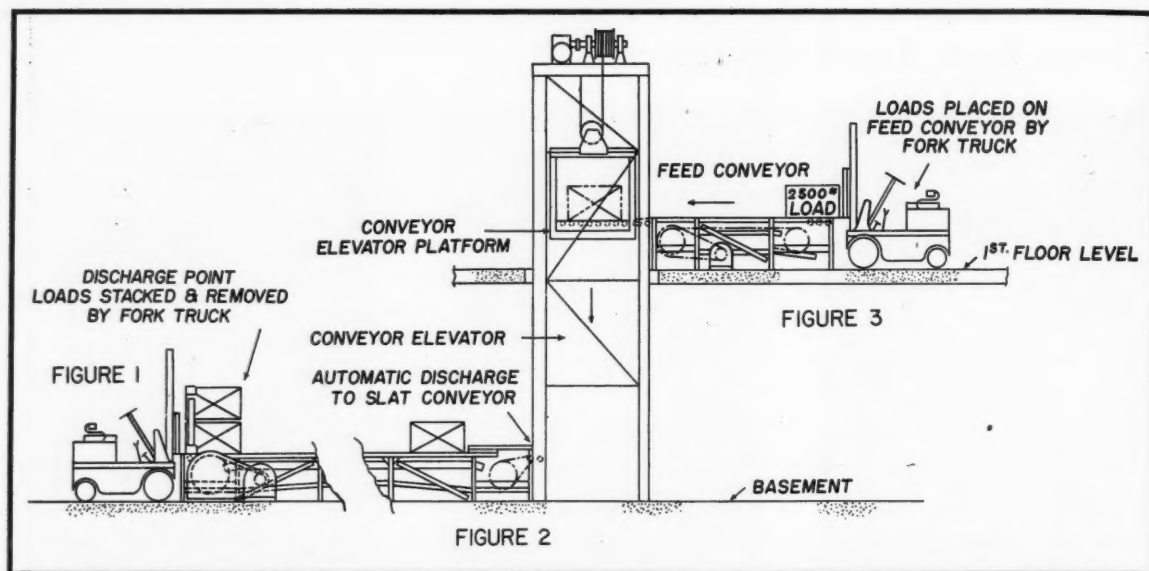
Reverse gear should not be used as a substitute for

brakes, because this action imposes severe strains upon the drive assembly. If the brakes are faulty, this condition should be reported to the maintenance department and the necessary repairs effected immediately.

### Proper Loading of Equipment

It should be the truck operator's responsibility that each load unit be securely piled before attempting to move the load. When this is ascertained, then the operator should drive the truck under the pallet as far as possible to avoid spilling the load. At the same time, the truck forks should be located centrally under the pallet, because off-center loads reduce the stability of the truck and also exert unnecessary strain on parts of the lifting mechanism.

**Turn to page 87**



**CONVEYOR-ELEVATOR SOLVES TOUGH PROBLEM OF MOVING GOODS BETWEEN FLOORS.** Incoming tin plate is moved by fork truck from receiving to a slat conveyor. This feeds the elevator which lowers it to the basement. Here, the loads are automatically transferred to another slat conveyor which delivers to fork trucks which remove the loads to storage. Everything except loading and unloading the system is automatic. Electric eye stops bundle at shaft opening. Note that areas in the sketch marked "Figure 1," etc. correspond to the operations shown in the photos with this article.

## Conveyor-Elevator Solves Problem Of Handling Between Receiving-Basement

A unique conveyor-elevator system, used to handle tin plate from ground-floor receiving to basement storage at the Baltimore Md. plant of the Continental Can Co. has (1) cut highway truck unloading time 66%; (2) eliminated a 140-ft. fork truck haul; (3) enabled one ground-floor truck to do the work formerly done by two (freeing one truck for other operations); (4) freed an elevator for other assigned tasks; and (5) eliminated congestion. Here are the details.

### The Former Problem

Formerly, when tin plate arrived via highway carrier, it was unloaded by two fork trucks which transported the loads some 140 ft. to an elevator. The elevator was in constant service handling other heavy inter-floor traffic. Because of this heavy demand bundles of plate had to be temporarily stored near the elevator entrance, causing con-

gestion and a general bottleneck. The long travel distance of the fork truck plus crowded conditions, slowed unloading operations to the point where it took half an hour to unload an incoming highway carrier.

### How The Problem Was Solved

The company installed an automatic conveyor elevator between the first floor and the basement. This carrier is fed by a horizontal slat conveyor on the first floor (Figure 1) and discharges onto a similar conveyor in the basement (Figure 2).

The conveyor-elevator was installed near the unloading platform to eliminate the long fork truck hauls. Now, only one fork truck is required for unloading, freeing the second truck for other tasks. In addition, only 10 minutes are needed to unload an over-the-road carrier—a time saving

**Story Continues On Page 62**



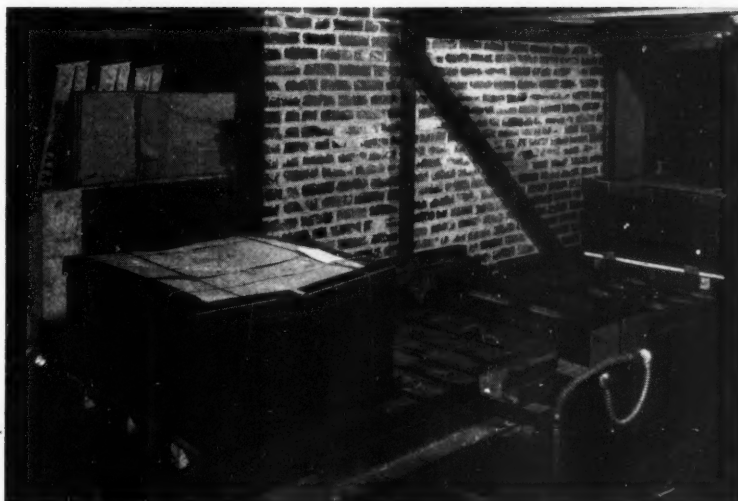
This System Cut  
Unloading Time 66%,  
Freed A Fork Truck  
And An Elevator . . .



**FIGURE 1: FEEDING THE SYSTEM** — Fork truck removes tin plate from incoming highway trucks, transports it to the start of automatic system. As shown, it is depositing a load on the slat conveyor which delivers to the conveyor-elevator.



**FIGURE 2: INTER-FLOOR HANDLING** — Loads arrive in the basement on the conveyor-elevator, are moved on the take-away slat conveyor to a point where a fork truck will pick them off. The entire system is controlled by electric eyes.



**FIGURE 3. UNLOADING THE SYSTEM** — Fork truck spots one load on top of the other, will transport two loads at one time to basement storage. Electric eye starts conveyor when bundles are removed, stops conveyor when next bundle reaches the end.





## ***Specially Designed Pallets For Safe Battery Handling***

Faster, safer handling of storage batteries for shipment from the Willard Storage Battery Co., Cleveland, has reduced the time required for this operation 30%. One improvement in a new palletizing system, not only saves time but eliminates physical handling and drastically reduces damage to containers. The details:

Utilizing conventional pallets, Willard engineers devised corner posts of heavy angle iron for stacking. These are shown by arrows in the photo (two additional posts are on the opposite side of the pallet). A three-in. stud on each post fits into the ferrule at each corner. Easily removable, the posts are inserted when the next pallet is ready for stacking.

Each pallet holds 25 standard size automobile batteries. Pallets can be stacked seven high. Fork trucks move them two at a time on Willard's new 180-ft. truck shipping dock.

The corner posts are also very valuable for retaining the loads during travel. Thus, maximum product protection is assured.

of 66%. Finally, the elevator used with the old system is freed and congestion is eliminated. Tin plate is unloaded and taken to the slat conveyor which feeds the conveyor-elevator, then lowered to the basement and discharged onto the second slat conveyor. At the end of this carrier, which automatically stops, the loads are picked off by a fork truck and transported to storage.

### **How The System Operates**

Except at the beginning and end of unloading operations, the handling system is operated as bundles break and make electric-eye beams. During

### **TECHNICAL DETAILS OF THE SYSTEM . . .**

The platform of the conveyor-elevator is made of a section of live roller conveyor. This platform is raised and lowered by a 7½ HP hoist. The basement conveyor is at right angles to the first floor conveyor so the tray of the conveyor-elevator is rotated 90° while descending or ascending. This is accomplished by guides along the walls of the elevator.

The horizontal conveyors are of the slat type to support the heavy loads. Slat are formed by bolting the ends of channel sections to two parallel roller chains in such a way that the channel sides form a flat conveying surface. The roller chains are supported by structural members. The first-floor conveyor is driven by a 2 HP motor and the basement conveyor by a 7½ HP unit. Both of these drives and the conveyor elevator shaftway are protected by safety guards. This custom built system was engineered, manufactured and installed by the Gifford-Wood Co.

these two periods, however, there are not enough bundles on the system to operate the electric eyes. Therefore, an auxiliary eye beam is installed at the discharge end of the basement conveyor to operate the system when starting up or shutting down. The beam is broken by raising the forks of the fork truck.

During normal operations, the key to the operation of the fully automatic system is a conveyor-high eye-beam at the discharge end of the basement conveyor. The eye stops and starts the system to move up new bundles to replace those taken to storage. As a bundle is removed from the conveyor by the fork truck (Figure 3), the electric eye beam makes contact and starts the entire system in motion.

The following steps automatically take place:

(1) The basement conveyor brings the next bundle to the discharge point and stops when the bundle breaks the electric eye beam.

(2) While this is taking place, the conveyor-elevator discharges its bundle to the basement conveyor and returns to the first floor for another bundle.

(3) A bundle is fed to the conveyor-elevator by the first floor conveyor. The bundle automatically stops in the center of the elevator's "tray".

(4) The elevator returns to the basement.

(5) The fork truck operator on the first floor places another bundle on the feeding conveyor.

(6) The first floor conveyor moves the next bundle to the shaft and an electric eye stops it at this point. A limit switch is also installed for this purpose should the electric eye fail.

Each movement of the bundles is controlled by an electric eye and limit switch so that each conveying unit will not move the load unless the next conveying unit is ready to receive it.

The basement fork truck takes two bundles to storage at one time. It removes one bundle and sets it on top of the next bundle as it moves into place. Then it lifts off both bundles as a load unit.

One fork truck on the first floor can keep two basement fork trucks busy even though the basement trucks carry two bundles at once. This is possible since the basement trucks make long hauls while the ground-floor truck operates within a few truck lengths.

**Make Your Job  
Easier . . . .  
See Page 46**



## ***Castered 'Chair Tables'***

### ***Make Manual Marking Easier***

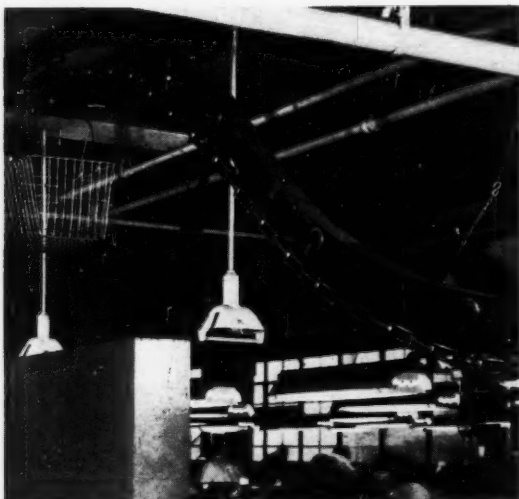
To reduce damage, speed handling in shipping and insure a better appearance on leaving the plant, storage batteries at the Willard Storage Battery Co. are painted on a conveyor as shown. To make it easier for operators, the company has designed caster-mounted "chair tables" on which the painters sit and on which are carried necessary tools and supplies. Arrows show the casters.

The "chair table" rides back and forth along the line on an inverted "V"-shaped track—the main casters under the center of the carrier are center grooved. At the back of the table is another caster which further supports the carrier and makes movement easier.

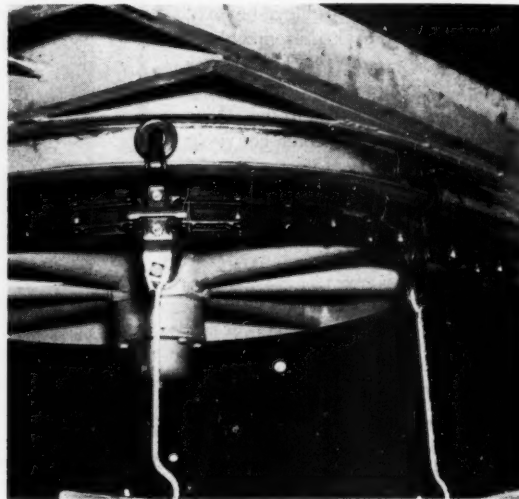
Thus, operators are able to move back and forth as the batteries pass—actually move with the conveyor to finish the job if necessary. Note also the bar which runs the length of the conveyor which enables the painters to propel themselves.

Batteries are painted, dried in infra-red ovens, given their final charge test the day they are shipped, and packed without being touched.

## Here Are The Four Major Lubrication



**TROLLEY WHEELS** that are poorly-lubricated won't turn. The drag imposed by locked wheels, especially on curved sections, may burn out drive motors.



**CHAINS** should be adequately lubricated at the pins, where links are joined. Idler wheels, like the one shown, are surface-lubricated by oil from the links.



**OXIDATION** of lubricants occurs rapidly when the conveyor passes through an oven, necessitating special lubrication methods or lubricants.

## Overhead Conveyor

Are you getting peak efficiency from your overhead trolley chain and cable conveyors? If these conveyors are pacing your production operations or if they are responsible for transporting parts through ovens, spray booths or dip tanks, they could be operating the way you want them to or you are losing money.

One major cause for lack of complete efficiency of overhead conveyors is improper lubrication. Specifically, bad lubricating practices can cause:

**EXCESSIVE** wear on trolley hubs.

**LOCKING** of trolley wheels, which creates excessive loads on the drive motor.

**FREEZING** or stiffening of the chain around turns; load thus increases on the drive motor, and causes wear on idler wheels on turns.

**ELONGATION** of holes in which pins are inserted to connect chains this means additional take-up of chains—eventually chains may break.

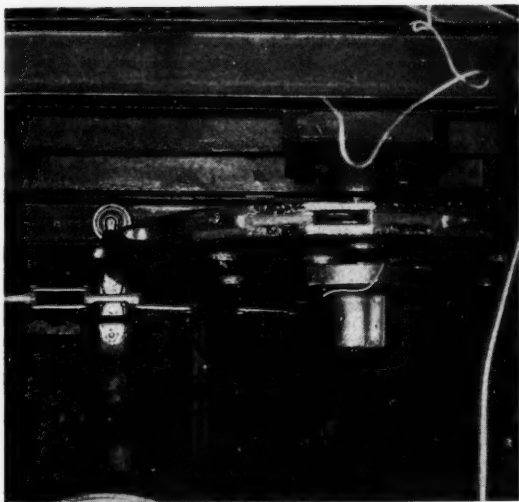
**WEARING** of cable strands from rubbing each other.

These are some of the results of improper lubrication. And, here are a few of the danger signals which give warning of incorrect lubrication:

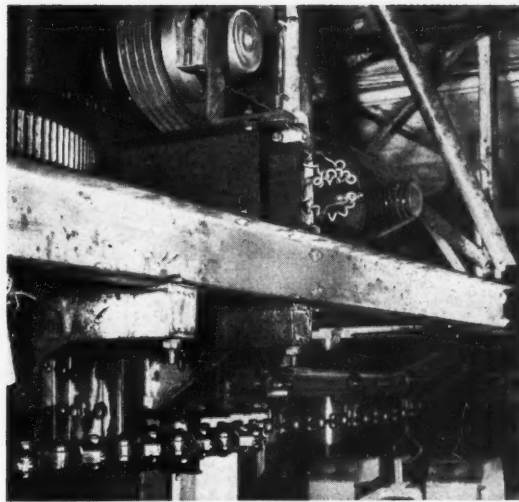
1. Trolley wheels not turning, providing the chain or cable is at correct tension.



## Areas in Overhead Conveyors . . .



**TAKEUP SPROCKETS** must turn freely so as not to place an added burden on the drive motor. Here, not only lubrication, but correct tension is important.



**DRIVING MECHANISMS**, in order to function efficiently, must be lubricated on schedule. Any stiffening of parts increases the load on the drive motor.

## Lubrication -- for Continuous Operation

2. Chain takeup sprocket being all the way back. Sometimes the chain is too long and will cause this, but normally it is caused by severe wear on the chain.

3. Necessity for frequent takeup.

4. Squeaking wheels.

5. Rusting of cable.

### Where and How To Lubricate

There are four major lubrication points on overhead equipment. They are:

1. Trolleys—where frame connects to wheel at axle and hub.

2. Pin Links Chain—where chains are joined together.

3. Drive Mechanism.

4. Takeup Sprocket.

The next step is to decide on the best method for lubrication. The following points are listed as a guide, but it must be remembered that a given installation will be the final determining factor as to the type of equipment used. For example, a very short overhead conveyor does not demand an automatic lubricating system, as does a longer system which would require a disproportionate amount of

time on the part of workers. Here are some suggested methods of trolley lubrication:

**Grease-Packed Wheels.** Some trolley wheels are installations. For all other systems, these guns require excess manhours and physical effort, and do not give lubrication uniformity, with the chance of drippage.

**Oil Cans.** Oil cans have the same drawbacks as grease guns. Furthermore, they can only handle grease when equipped with special fittings.

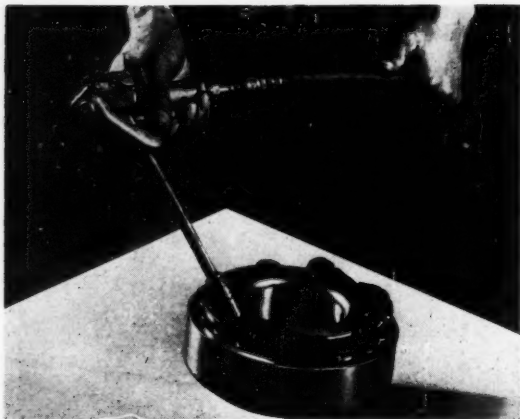
**Automatic Trolley Lubricators.** Automatic trolley lubricators are designed for all but the very small conveyor installations. They do the job without physical effort and wasted down-time, insure uniformity and prevent waste lubricant because they prevent drippage.

**Grease-Packed Wheels.** Some trolley wheels are grease packed, eliminating the need for outside lubrication for lengthy periods of time depending on operating conditions, such as heat, moisture and chemical fumes.

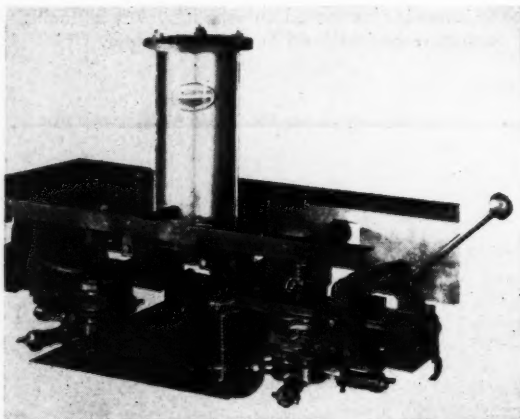
For lubricating chains, the following equipment may be used:

**Oil Cans.** Oil cans, while economical for small installations, have the same drawbacks as listed for lubricating trolleys.

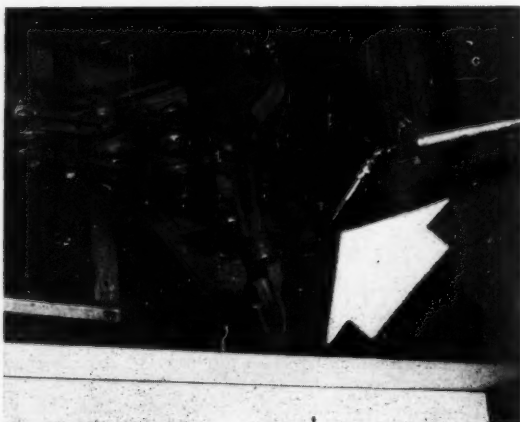
Turn the page please



**GREASE GUNS** are economical for small installations. This gun is being used with silicone grease for a core oven conveyor drive roller bearing.



**AUTOMATIC** trolley lubricators are designed for all but very small conveyor installations. They insure uniformity and prevent wasted lubricant.



**SPRAYING UNITS** (arrow) discharge a fine oil mist onto conveyors. The oil penetrates to wearing surfaces which might not be reached otherwise.

## Conveyor Lubrication . . . (cont'd)

**Brushing or Swabbing.** While covering a wider area, these methods do not provide uniformity and may result in drippage.

**Automatic Air Spraying Systems.** Automatic air spraying systems offer the advantage of uniform application, plus the fact that spraying forces lubricant into the bearing area of the pin, often not reached with brushing or swabbing.

**Spraying Units.** A recent development in automatic lubricating equipment is a spraying unit that discharges a very fine mist onto conveyors. These airborne oil particles, carried by low air pressure, penetrate to wearing surfaces which may not be reached by other methods. Idler wheels at turns are surface-lubricated by oil rubbing off the links as they pass over them. However, the wheels turn on sealed bearings.

### Special Problems

One of the most serious problems facing manufacturers is that of lubricating overhead conveyors which travel through ovens or other areas in which the temperature rises above 300° F. Here, the problem is different because of rapid oxidation of the lubricants.

In recent years, this problem has become even more critical because of the trend toward installations operating in temperatures above 600° F. Here are a few hints on lubricating conveyors that travel in hot areas:

1. Use oil, whether it is petroleum or synthetic, that has a relatively low flash point. This type of lubricant leaves a cleaner surface with less carbon deposits that cause locking or sticking of bearings or pins.

2. In applying oils to chains it is recommended that thin films be used. This, too, adds to cleanliness, as less carbon will be formed on bearing areas.

3. The use of smaller amounts of oil will tend to minimize drippage from chains when they get in ovens.

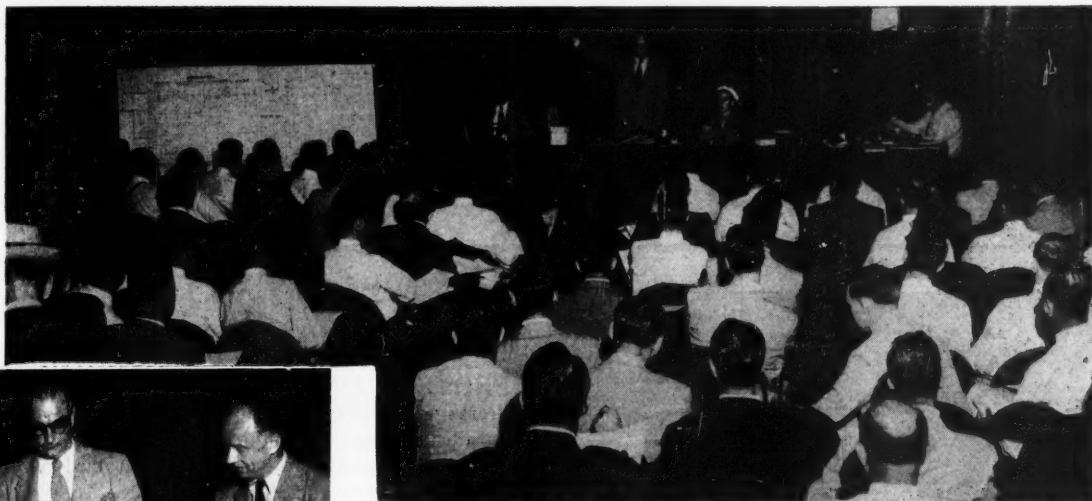
4. Chains traveling through ovens should be lubricated frequently, preferably at the point where the conveyor leaves the oven.

5. The use of silicone lubricants may be considered. These lubricants can withstand high temperatures, and are recommended for use on ball or roller bearings. Furthermore, silicon lubricants will not drip, but will slowly evaporate when heated.

In addition to improper operation of conveyors because of poor lubrication, lack of uniform lubrication and resultant drippage can damage the loads which are carried by the conveyor. For example, grease and oil can spoil textiles, enameled surfaces before baking, soil freshly painted surfaces, etc. Thus, bad lubrication can cause immediate production loss even apart from the eventual harm to the conveyor itself.

Here's a final reminder: Although the finest equipment and the best greases are used, lubricants cannot get into bearings through clogged fittings. Many cases of bearing failure are caused by clogged fittings—so keep them clean and replace when necessary.

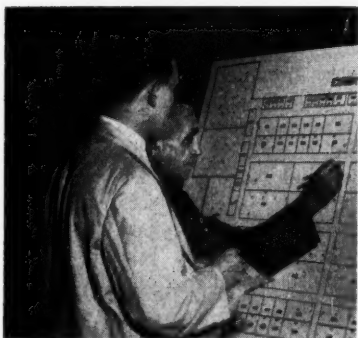
*Our sincere thanks to the following concerns for their fine cooperation in preparing this article: Dow Corning Corp., J. N. Fauver Co., Lincoln Engineering Co., Stewart-Warner Corp.—Ed.*



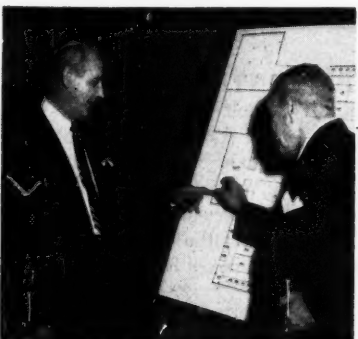
**THESE MEN ARE PLANNING THE NEXT MATERIAL HANDLING SHOW.** More than 200 representatives of manufacturers of material handling equipment met in Philadelphia (the scene of the next exposition) to select booth spaces and go over plans for the event. The show is scheduled for Convention Hall, May 18-22. Saul Poliak, (arm upraised), explains the rules of the drawing to the exhibitors in attendance.



**THE FIRST NAME** was drawn by John Mevius, American Engineering.



**1st CHOICE** went to Baker-Raulang Co. That's Tom Wilson, foreground.



**RUSSEL F. OAKES, (left)** Clark Equipment Co. points to his choice.

## *Planning The Next Material Handling Show*

**Place:** Convention Hall, Philadelphia

**Date:** May 18-22, 1953

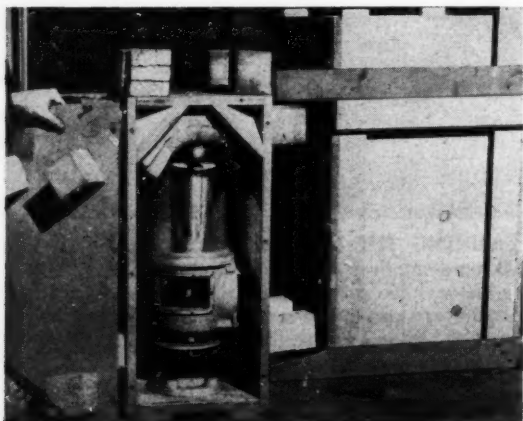
Plans are being set for the biggest and best National Material Handling Exposition to be held in Philadelphia's Convention Hall, May 18-22, 1953.

These pictures show some of the more than 200 representatives of manufacturers of material handling equipment who met in Philadelphia recently to choose booth spaces. To insure equality in choice of areas, exhibitors' names were drawn by lot.

In the photo above, Saul Poliak, (arm upraised) of Clapp & Poliak, Inc., which conducts the show, explains the rules of the drawing. Shortly thereafter John Mevius, sales manager, material handling and hydraulic divisions, American Engineering Co., drew the first name out of the fish bowl.

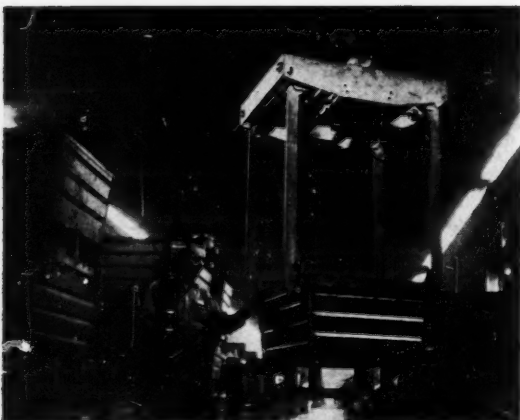
In addition to assigning booth spaces, those in attendance at the meeting went over detailed plans to make next year's show the finest of them all. Since the first show in Cleveland, back in 1948, it has increased in size and importance until it now ranks as one of the nation's largest industrial expositions.

## COST CUTTING IDEAS . . .



### PROTECT FRAGILE SHIPMENTS . . .

Breakage of delicate meteorological instruments in transit has been practically eliminated by the Department of Transport, Toronto by use of foamed rubber cushioning material used as shown here. Secret is to float the instrument between several small pads of rubber, but to have the rubber touching at only five or six points with air in between. This allows the instrument to move but keeps it cushioned against knocks.



### VERSATILE SHOP CONTAINER . . .

This container, designed and made for their own use by Lincoln Electric Co. is handled with overhead equipment, with fork trucks, or on roller conveyors, with equal ease. It also stacks or nests for storage. For overhead handling, it is picked up by a grab as shown, or by hooks extending above the top of the container. Container is made from 14 gauge hot rolled steel with 10 gauge steel bent into channels to form the feet. Special foot is designed to operate with take-off equipment on power driven slat conveyors. Take-off equipment hooks into leg to deflect container off the line.



### REMOVE CHIPS CONTINUOUSLY . . .

Chip removal from 3L Gisholt automatic lathes at General Electric Co. was made continuous through installation of conveyors like this. Chips are funneled onto the hinged steel belting, carried horizontally until clear of the lathe's operating mechanism. Then they are transported parallel to the lathe up the conveyor incline into tote boxes. When boxes become full, they are hauled away and dumped.



## COST CUTTING IDEAS . . .

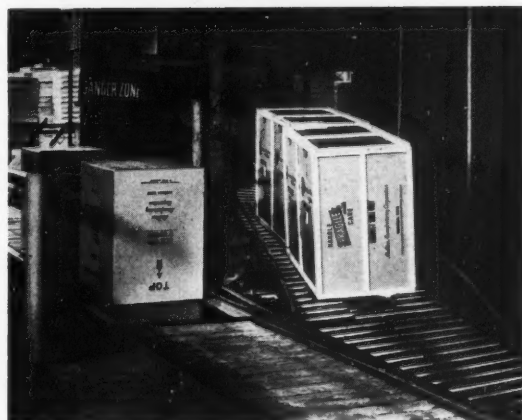
### SAVE SHIPPING SPACE . . .

The Maytag Co. is saving about \$34,000. per year by using smaller shipping containers than previously for its automatic washers. In addition to the savings in corrugated board and steel strapping, the center of gravity of the washer is now nearer the center of the container, making it easy to handle. Also, more of the filled containers can be stored in the same space, and one more tier (six washers) will fit inside a railroad car. Bottoms and tops of the container are flanged and when closed with steel strapping cannot be opened prematurely without breaking the seal.



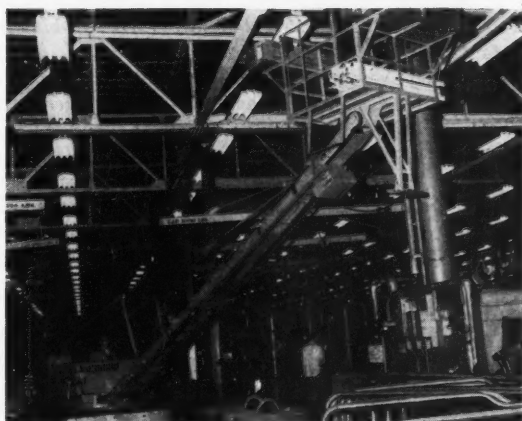
### CONTROL TRAFFIC AT CONVEYOR JUNCTIONS . . .

Mullins Mfg. Corp., Warren, Ohio, uses a solenoid-operated timer device to control traffic at a junction of two conveyors coming from two separate packing departments. Cartons (left), arrive with greater frequency and are pushed onto slat conveyor by live roller section shown under first carton. A brake holds back cleated panel boxes (right) until four have accumulated. This trips solenoid causing live roller section to stop, and releasing brake under boxes. Enough time is allowed for four panel boxes to move onto the slat conveyor, then the brake sets again, and the roller conveyor section resumes flow from line at left.



### USE A CRANE TRUCK FOR MAINTENANCE . . .

Maintenance goes over with a "boom" at the new plant of Caterpillar Tractor Co., in Joliet, Illinois. A 6,000 lb. capacity electric crane truck equipped with an articulated platform is used for faster, easier maintenance of lighting and other equipment. The crane can position the boom and platform for overhead work above machine tools and other obstacles, in locations difficult to reach by other means. Boom extends to 19 ft.



REPORT FROM . . . . .

## The British Material Handling Exhibition



BY

*Irving B. Hexter*

Publisher, FLOW Magazine

As they say in England, I've had my first "go" at a British Industrial Exposition. This was the second Material Handling Exposition sponsored by the magazine MECHANICAL HANDLING, the FLOW of Britain.

The Exposition, held in the Olympia Arena, was comprised of the "stands" (exhibits to you) of 170 exhibitors. The stands were quite large and very well done and the whole show was an excellent one. It certainly is as fine a show as any of the industrial exhibits held in the United States and far better than some. Each of the exhibits is well laid out and amply manned by men who were most solicitous of every visitor. Practically all the exhibits were operating ones. The usual run of material handling products were on display, but there were several important differences.

Their trucks have nothing on ours in any detail save one. They feature the small diesel engine to a far greater extent than we do. They feel that their diesels are superior to our petrol motors in three important features—the absence of fumes, the minimum fire hazard and the economy of operation. Certainly diesel oil is cheaper than gasoline and one material handling engineer told me, (I quote) that his firm saves a pound (\$2.80) a day a truck in the operation of their diesels. Most of the trucks are small ones. They displayed their first large truck at this show and it is an 18,000 lb. job, with hydraulic power steering. Most truck exhibitors feature the smallness rather than the largeness of their trucks. The reason for this is found in the type of manufacturing facilities found generally

throughout England. Old buildings, narrow aisles, different floor levels are the rule rather than the exception here. The number of modern single story plants is minimal, so that English industry has an altogether different handling problem than we have. And it can be said, a much more difficult one.

One diesel powered truck featured a compressed air starting system. Right behind the driver's seat is a compressed air storage bottle at 450 lb. pressure, which starts the motor and which is kept at this pressure by a small inbuilt compressor. The manufacturer claims that since there is no ignition spark, the danger of fire is minimized. The other displays of trucks were not different than our own because most of their designs are (or were) inherent in our own.

The acceptance of material handling philosophies has been somewhat slower in England than in our own country. Of course, the progressive firms here, like at home, accept material handling with alacrity, but in the die-hard textile plants in the north it has been tough going for these equipment people. Within the last month there has been started in London a material handling society which limits its membership entirely to users. They had a society like our own, to which both users and manufacturer's representatives belonged, but found that it didn't work and therefore they started anew with only user members.

It is my distinct impression that our conveyor manu-

**Turn to page 106**



Towmotor loading a truck at Welch Grape Juice Company, North East, Pa.

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FLOW • AUGUST, 1952

# New Slants on Scrap Handling....

Experts Cover Latest Developments in this Common Problem

Presented here is a digest of the MHI proceedings. Complete reports are available. Drop us a line to get your copy. You can also have a chance to match wits with the experts. Read the problems and decide how you would solve them. Then see what was suggested.



**DISCUSSING SCRAP HANDLING PROBLEMS:** (Clockwise starting at foot of table) R. L. Wolter, Yale & Towne Mfg. Co.; R. H. Weingartz, Deere & Company; O. T. Henkle, Jr., Mercury Mfg. Co.; L. L. Poe, Falk Corporation; G. H. Meyfarth and E. W. Franz, May-Fran Engineering, Inc.; D. E. Martinelli and D. F. Redman, International Harvester Company; L. W. Shea, Union Metal Mfg. Co.; B. R. Carter, MHI Staff; Chairman W. E. Schirmer, Clark Equipment Co.; J. L. Beltz, MHI Staff; J. G. Bucuss, MHI Staff; A. S. Wroblewski and C. E. Barner, American Monorail Co.; W. J. Demberger, Ford Motor Company; G. Walden and C. E. Cooke, Dempster Brothers; J. A. Wall, Caterpillar Tractor Co.; C. E. Killebrew, The Frank G. Hough Co.; L. Olson and W. Nelson, Rockford Drop Forge Co.; F. J. Schmidt, American Steel Dredge Co.

The importance of good scrap handling methods and their effect on profit and loss in a plant cannot be over-estimated. Difficulties in disposing of material, ranging from metal turnings and chips to paint and oil sludge, paper and refuse, can cut deeply into the income of an otherwise profitable operation. At the second in a series of User-Manufacturer workshop-type clinics sponsored by the Material Handling Institute, steps were taken to reduce loss in this phase of plant operation. Representatives of six troubled companies gave details of the problems and application specialists representing eight material handling equipment manufacturers suggested types of devices to use.

Read over the six problems presented on the following pages and before reading the comments of the experts, decide in your own mind what you would probably do to solve each problem.

## This is Problem No. 1:

This firm has a scrap problem similar to many other plants—that of having various manufacturing operations spread over a wide area.

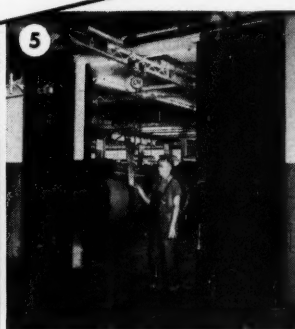
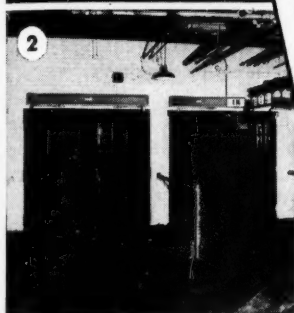
Punch and shear, machining, primary assembly and final assembly are in individual buildings connected only by roadways.

Most scrap-production areas are reasonably close to a centralized disposal point, but one area is located at a relatively great distance.

All scrap hoppers (Roura type) are placed in outgoing stations in processing departments. Fork trucks responsible for plant material handling between zones are required to transport the hoppers periodically to the scrap accumulating area, dump them into the scrap bins, and return to the



# Stanley Magic Door Controls For Specific Objectives



## DESIRED OBJECTIVE

	Horizontal Photoelectric Opening	Vertical Photoelectric Opening	Pull Cord	Push Button	To be used in conjunction with Opening Controls	Photoelectric safety desirable	Time Delay
1 Door to be opened from a vehicle or by a pedestrian thru a broad approach area	yes	possible	yes	no		yes	possible
2 Door to be opened from a vehicle or by a pedestrian thru a restricted approach area	yes	yes	yes	yes		yes	yes
3 Door to open for people whose hands are full (includes hand trucks)	yes	yes	no	no	by use of key	yes	no
4 Door to open only for selected vehicles or pedestrian (See Picture No. 6)	no	no	no	yes with attendant	yes with attendant	yes	yes
5 Monorail operation—Door to open for passage of overhead material of overhead equipment handling equipment	yes	yes	yes	yes	yes	yes	yes
6 Door cannot be opened by traffic but by guard from a remote control point	no	no	yes	yes	yes	yes	no
7 Air Lock Operation—Door to open only if other door or doors are closed	yes	yes	yes	yes	yes	yes	yes
8 Door to open only for traffic in one direction	yes	yes	yes	yes	yes	yes	yes

For Pedestrian traffic only—Magic Carpet may be best suited for the desired objective

These and other controls are used singly and in many combinations. Each installation is engineered to suit the particular objective and to fit the individual traffic problem.

## ... and beyond the specific objective: operating efficiency

Whatever the door control requirements in your plant, there is a type of Stanley Magic Door Control—and in most instances, a choice of types—to meet that objective (see chart).

The ultimate objective, however, is not automatic door control, but plant operating efficiency—through man-hours saved . . . faster movement of materials . . . maintenance of a uniform humidity and temperature . . . safety to men, materials, and equipment.

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## "Ferris Wheel" Simplifies Order Filling of Rubber Hose

The DeVilbiss Co., Toledo, has designed a novel device for fast order filling of rubber hose. The device, labeled the "Ferris Wheel" holds eight reels of different types and sizes.

As shown here, an operator turns the "wheel" crank to select the correct hose as specified by the customer's order. The hose is lined up with a workbench in the background; the product is then unreeled and measured. When the measuring meter registers the correct length, the hose is cut and the fittings are installed. Reels can be changed quickly. The "wheel" has eliminated excessive physical handling and an awkward storage and feeding problem.

## New Slants On Scrap Handling . . .

### What's The Break-Even Point For Baling

departments where they originated. The scrap is loaded into railroad cars by bucket crane for shipment. Approximately two carloads (50 to 60 tons) are accumulated each week.

In some plants, the scrap hoppers are used to load directly into demountable truck bodies instead of storage bins. When the truck bodies are filled, they are transported to the scrap dealer's yard with his equipment.

(Presented by R. H. Weingartz Material Handling Engineer, Deere and Co.)

The firm receives the same price per ton from dealers, whether the scrap is loaded into gondola rail cars or into demountable truck bodies.

Under these conditions, the problem is: *would it be advisable to consider baling and briquetting equipment, or what improvements could be made to the present methods to reduce scrap handling costs.*

### What would you do?

#### Here's what the

#### experts suggested—

Because of the relatively small amount of scrap produced, baling or briquetting would probably be uneconomical. The break-even point for baling is about 30 tons of scrap daily.

An observation of the cost differential, supplied at the meeting, on the use of the two different methods in these plants (demountable truck bodies versus collection bins at points of accumulation) was too small to warrant change.

The discussion then turned to the specific steps and procedures of scrap handling from primary generation to the point of accumulation.

One suggestion was the use of containers equipped with wheels or casters, at each production machine, of a type that could be pulled away by tractor-trains. This would eliminate the manual hopper-loading operation, because the roll-away containers could be taken directly to the final scrap storage bins at the point of removal.

Another suggestion was the use of

## New Slants On Scrap Handling . . .

### Castered Containers Could Do the Trick

dumping buckets at the point of generation; these buckets would be picked-up and taken directly to the final storage bins. An objection to this suggestion was the great distance of travel from the farthest point of generation to the final storage area.

An overhead conveyor system also was discussed, but the great distances involved plus the problem of continuous loading eliminated this as a practical solution.

Two other suggestions to eliminate loading at the point of generation were:

1. The installation of containers which would permit the scrap to fall directly into them. In the case of power shears or punch presses, for example, the containers would be located adjacent to and flush with the table or bed of these machines. An objection to this suggestion was the variable heights that would be required of the containers.

2. The use of built-in, automatic conveyors, especially for small scrap, such as cut-outs or residue cuttings.

#### This is Problem No. 2:

This company has a large stamping plant in which it is necessary to maintain a continuous and uninterrupted flow of sheet metal scrap from press lines to balers. The press shop now produces about 800 tons of scrap a day on 18 press lines. The major part of the problem is to keep balers operating continuously and at the same time make sure that scrap is removed from the presses so as to maintain production.

There are some secondary considerations that influence this problem. First of all, the nature of the scrap varies, and has an effect upon the loading of balers, sometimes resulting in under weight bales. Specifically, it is necessary to supply enough material, regardless of size, to produce bales weighing 1200 lbs each.

At the present time scrap is being accumulated in castered bin contain-

## No Missing Link Here

Deep in the Jungles "way back when"—  
Apes made the FIRST "Rivetless Chain"

Apes have long been known to form "rivetless" chains. By the simple coupling process of linking tails they swing themselves out to cross streams and gorges.



## Drop-Forged Rivetless Chain another FIRST by JERVIS B. WEBB COMPANY

Proved by years of dependable service is the Drop-Forged Rivetless Chain, first developed by Jervis B. Webb Company for Trolley Conveyors. Simple and strong, it is cheaper and lighter per unit of ultimate strength than any other type of conveyor chain. It can be installed or removed by unskilled labor. Having no rivets, welds or bolts, it requires no special or joining links and may be disconnected at any point, yet it is so designed that it cannot become disconnected while in service.

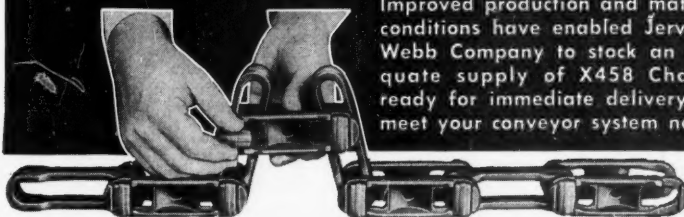
The No. X458 Chain (illustrated below) is completely interchangeable with the Webb FIRST—the original No. 458 Chain designed in the early Twenties by Mr. Jervis B. Webb. X458 Chain has the improved webbed side link which substantially stiffens it, preventing telescoping while in service.

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## New Slants On

### Scrap Handling . . .

#### How To Keep

#### Balers Supplied?

ers designed for fork truck operation. Trucks are equipped with revolving heads for discharge.

The installation comprises two platform dumps with individual steel belt conveyors and balers. Scrap is dumped onto conveyors which raise it 10 ft in 30 ft and into baler openings.

*The basic problem is to develop a method having the proper arrangement for pre-dumping by fork-truck into a supplemental hopper ahead of the baler or some alternate method that would be an improvement over the present system. Essentially, the means devised must assure a sufficient supply ahead of the balers to maintain their continuous operation and to produce 1200 lb bales.*

(Presented by W. J. Dernberger, Supervisor, Material Handling Eng. Ford Motor Co.)

## What would you do?

Here's what the experts suggested—

There was considerable discussion of various solutions, including the use of conveyor systems throughout; the possibility of using supplementary containers; and other ideas designed to effect smoother flow of the charge to the balers.

One of the many ideas under discussion, was summarized as follows: It was pointed out that problems of building construction rule out some of the proposed solutions. Essentially, it is a matter of leaving the layout unchanged but correcting the situation at the discharge end of the present conveyor. It was suggested that the solution lies in some form of batch-type loading to maintain the proper weight of scrap. It would involve the installation of some suitable weighing-scale hopper which would assure a standard-weight load for each charging cycle. This would be used in combination with the present servicing conveyor, where fork trucks dump directly onto the conveyor.

It's New . . .

# TRACTO-LIFT'S POWER KING!

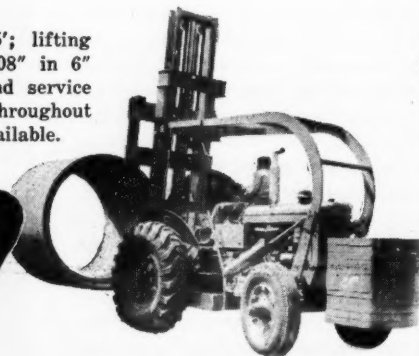
**POWER KING FACTS:** Lifting height, 10'-25'; lifting capacities, 10,000-15,000 lbs.; fork lengths, 36"-108" in 6" variations. Climbs inclines up to 20%. Parts and service for standard industrial tractor unit available throughout world. Complete line of versatile attachments available.

**LIFT**  
*Company*  
**TRACTO**

2011 Baltimore, Kansas City 8, Mo.

## New Tracto-Lift Model Ready for Heaviest Jobs

Three giant-size Tracto-Lift models are now available in the rugged, new POWER KING series. The basic Tracto-Lift feature of over-size pneumatic tires that give maximum traction and the ability to operate even on rough, unpaved ground, has been incorporated into a fork lift with amazing work capacity and power. Has wide range of speeds—6 forward and 6 reverse speeds. Utilize wasted outside storage space, handle bulky, heavy materials, of ALL KINDS easily by employing POWER KING!



Write today for complete specifications and illustrated folder on Tracto-Lift's new POWER KING Models No. MU-100, MU-125 and MU-150.



## New Slants On Scrap Handling . . .

### How To Transfer Scrap

#### From The Shop To Gondolas

#### This is Problem No. 3:

Two methods for transferring forging scrap from shop into gondola cars have been tried by this company. Approximately  $1\frac{1}{2}$  cars of scrap must be handled daily. In their earliest method: scrap was hauled from the forge shop to scrap bins in the yard using an electric truck and large dump boxes. The scrap was placed in a designated bin and accumulated until a carload lot had piled up. At that time, the scrap was forked by hand onto a belt conveyor, and conveyed into the car. Scrap removed some distance from the conveyor was hauled to the conveyor in a wheelbarrow. This method was abandoned due to the strain on personnel of this heavy work. The second system, now in use, is the same as the initial system up to the point where scrap is to be taken from the bins and put into gondolas. Now, a mobile crane equipped with a magnet, loads scrap from bins into cars. This method, however, is resulting in damage to the concrete walls of the bins.

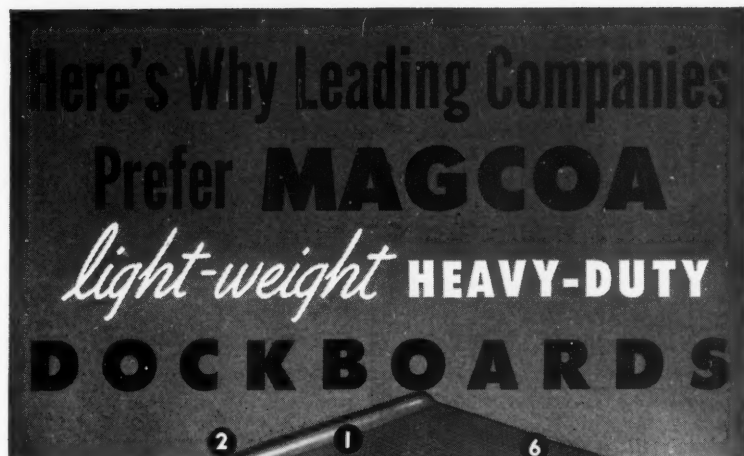
(Presented by Lloyd Olsen,  
Ass't. Supt.,  
Rockford Drop Forge Co.)

#### What would you do?

Here's what the  
experts suggested—

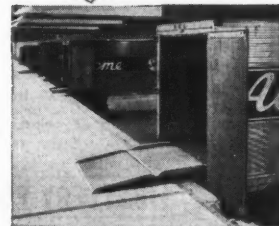
It was suggested that perhaps a magnet-equipped overhead crane might be used. (The crane would extend over the bins and the railroad tracks). The questioning delegate replied that this system had been considered, since they felt that with this system the load is under better control and would result in less damage to the walls. However, it had been discarded as too expensive.

It was suggested that the bins be elevated, equipped with drop bottoms, so that the cars could be run underneath and loaded. During the discussion it was pointed out that although this would solve one problem, it would create another—that of loading the elevated bins.



Here are six good reasons why many of America's leading companies have standardized on MAGCOA Light-weight Magnesium DOCKBOARDS for use in *all* plants—six important advantages that only MAGCOA can offer you.

1. Quarter-round safety curbs deflect wheels, prevent run-offs, prolong tire-life; are low for equipment clearance
2. Rounded curb ends for safer, easier, tire-saving turns
3. Rugged, bridge-built safety spans—individually engineered for extra strength and elimination of dangerous slipping
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5. Special rounded edge beveling eliminates jars without sacrificing strength—saves tires, equipment and loads
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For use on truck docks



... at railroad sidings or wherever material is moved

**Light-weight HEAVY-DUTY Magnesium Construction**  
Lightness, coupled with ruggedness, is another Magcoa Dockboard feature that assures you of quicker, safer, easier handling . . . as it has for others. Use the handy coupon to get helpful literature illustrating exclusive Magcoa Dockboard features and other Magcoa materials handling equipment. At the same time, ask for new literature showing how Magcoa's magnesium fabricating experience and facilities can help you improve your products through use of light-weight, heavy-duty magnesium.

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Circle No. 49 on Reader Service Card for more information

# BIG VALUES in USED HANDLING EQUIPMENT



## GAS FORK LIFT TRUCKS

**CLARK** Fork Lift Truck, 15,000 lbs. capacity. Model: Yardlift 150. Purchased new November, 1951. 17" lift, 48" forks. Pneumatic tires. Like new! .....\$5,750

**HYSTER** Fork Lift Truck, 15,000 lbs. capacity. Model: 150. Serial #2247. 48" forks, 17" lift. Pneumatic tires. REBUILT and GUARANTEED. ....\$4,500

**2 CLARK** Fork Lift Trucks, 6,000 lbs. capacity. Model: Yard Lift 60. Recent models. 119" lift, 42" forks. Pneumatic tires. Thoroughly REBUILT. ....\$3,750

**HYSTER** Fork Lift Truck, 7,500 lbs. capacity. Model: 75, made in 1948. Serial #UT34330. 108" lift, 42" forks. Pneumatic tires. REBUILT and GUARANTEED. ....\$3,250

(Can be furnished with concrete block forks.)

**TOWMOTOR** Fork Lift Truck, 10,000 lbs. capacity. Model: LT72. Powered by Continental gas engine. 74" lift, 42" forks. Solid tires. ....\$3,000

**CLARK** Fork Lift Truck, 2,000 lbs. capacity. Model: Yard Lift 20. Gas powered. Pneumatic tires 84" lift, 72" mast, 36" forks. ....\$1,800

**TOWMOTOR** Fork Lift Truck, 4,000 lbs. capacity. Model: LT40. Made in 1951. Serial #485016. 120" lift, 36" forks. Solid rubber tires. 6 to 10 months old. Like new! ..\$2,500

**TOWMOTOR** Fork Lift Truck, 5,000 lbs. capacity at 15" or 4,000 lbs. capacity at 24". Model: LT48. 108" lift, 36" forks. Solid rubber tires. ....\$2,100

**ROSS** Fork Lift Truck, 12,000 lbs. capacity. Model: 16MT, made in 1947. Serial #687. Pneumatic tires. REBUILT and GUARANTEED. ....\$4,250

**ROSS** Fork Lift Truck, 15,000 lbs. capacity. Model: 15MT. Serial #421. Pneumatic tires. REBUILT and GUARANTEED. ....\$4,750

## BATTERY POWERED FORK LIFT TRUCKS

**5 AUTOMATIC** Electric Fork Lift Trucks. 3,000 lbs. capacity. Model BF30 Skylift, made in 1948. Spark Enclosed Construction. Serial #15332, #15333, #15334, #15335, #15336. 83" mast, 130" lift, 36" forks. Complete with Exide lead battery. ....\$3,500 ea.

**LEWIS-SHEPARD** Fork Lift Truck, 2,000 lbs. capacity. Model: EFTP-2. Serial #1C66. 67" lift, 83" mast (non-telescopic), 36" forks. REBUILT and GUARANTEED. Less battery. ....\$1,600

(Battery furnished on request)

**AUTOMATIC** Electric Fork Lift Truck, 2,000 lbs. capacity. Model: Skylift BF23, made in 1948. 130" lift. Complete with 16-cell TLM Exide battery. ....\$2,750

## MOBILE CRANES & TRAILERS

**500 WAREHOUSE TRAILERS**, 42" wide, 84" long. Equipped with automatic couplings, steel wheels. Manufactured by MERCURY and other trailer companies. Price FOB Cleveland, ....\$73. ea.

**YALE CRANE**, 3,000 lbs. capacity. Model: K42-3-7, 12' to 18' revolving boom. Battery driven. Overall width 47". Base length 110". Complete with 18-cell, 19-plate Gould lead battery, or with ready power unit. Solid rubber tires. ....\$3,250

**BAKER CRANE**, 6,000 lbs. capacity. Model: CX8. 12' to 18' revolving boom. Battery driven. Overall width 63". Base length 108". Solid rubber tires. Complete with either ready power unit or battery. ....\$4,200

### GUARANTEE

All equipment listed above has been completely REBUILT and is GUARANTEED against mechanical defects for 60 days.

All prices are FOB Brooklyn, New York, except the 500 warehouse trailers which are FOB Cleveland, Ohio.

Call, Write or Wire Today!



## MACHINERY CORP.

460 TROUTMAN STREET, BROOKLYN, N. Y.  
HYacinth 7-3331

## New Slants On Scrap Handling . . .

### Perhaps Containers Are The Answer

The use of demountable truck bodies was considered. The truck bodies could be loaded by the fork trucks which bring the scrap from the forge shop. With this method, dealers might pay less for scrap in such small (8 to 10 cu. yd.) lots, than they would for carload lots. But, it was claimed, handling costs might balance this minor loss.

The question was asked: is it not possible to load the gondolas directly—have the fork trucks dump directly into the gondola without the intermediate storage in the bins. It was pointed out that this would require a number of gondolas on hand at all times—which is not possible.

Next the use of mechanical loaders was discussed. These units could load from the bins without damaging the walls. A discussion on the possibility of using scrap storage boxes followed. In this method, the scrap would be accumulated in the shop in a scrap box, the box carried by fork truck to the scrap storage area, and stored there in boxes. Then, when a sufficient amount to fill a car had accumulated, the boxes would be dumped into the car by the fork truck equipped with revolvator. This would eliminate the necessity for a sturdy wall and require only a light fence to divide the area.

In the final summary, the use of scrap boxes, in which the scrap could be collected in the shop and stored in the yard—and therefore eliminating walls in the yard—seemed to get the most favorable comment. It was suggested that the delegate make a cost comparison between continuing rebuilding of the walls and the investment in storage boxes.

### This is Problem No. 4:

This company's problem is a civic as well as an industrial one. The plant covers approximately 20 acres in 33 separate buildings, some of which are multiple story. Refuse from these buildings is collected on four-wheel trucks. Sometimes, as many as 30 janitors are occupied in the collec-

## New Slants On Scrap Handling . . .

### How About Handling Refuse

tions, some making up to eight trips per day, others as few as one or two. The average distance traveled is estimated at about 1000 ft.

Truck loads of refuse are moved to gondola cars which are loaded manually. Loading is expedited by dropping an end of a gondola when it is empty but as loading progresses, the end must be closed and refuse tossed over the sides. In trying to get as much material as possible into cars, flattened cartons are often used to extend the sides upward. When the refuse arrives at the gondolas, it is loose and bulky, and has a tendency to blow out and scatter during windy periods.

The company determined that the refuse probably does not have enough value to justify separation into various types for sale. At one time, an incinerator was employed but due to great distances in hauling, the wasted time and excessive expense involved caused its discontinuance. Another deciding factor was the great deal of separation necessary to remove unburnable material.

*This company requested suggestions for ways to speed up collections, speed up loading of gondolas, and eliminate the scattering of loaded material.*

(Presented by D. F. Redman,  
Plant Engineer.  
International Harvester Co.)

#### What Would You Do?

#### Here's what the experts suggested—

Participants indicated that the problem could be solved satisfactorily through the installation of balers at several centralized locations and mechanization of delivery from balers to gondolas. Material could be hauled the comparatively short distances to the balers, baled, and then with considerably less frequency than is now necessary, hauled to the gondolas. As a result, the following advantages should result:

1. Fewer gondola cars would be

Turn To Page 128



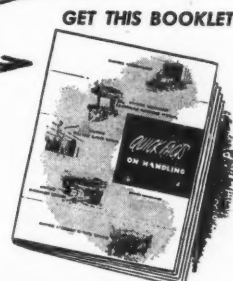
**USE OVERHEAD SPACE!**  
Here's fast, flexible materials handling!  
**WHITING TRAMBEAM SYSTEMS** increase  
plant capacity—step-up production—  
save space, manpower and money.

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Fast, safe, dependable, high-speed handling  
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each of these cost-savers now. Write for  
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#### HAUL AND SWITCH RAILWAY CARS!

The amazing **WHITING TRACKMOBILE** has a draw-bar pull  
equal to that of 20-ton locomotive! It operates on track and  
road! It's priced at a fraction of the cost of conventional type  
plant locomotives. It cuts costs, speeds hauling, saves time.



# What's **NEW** in useful literature

The publications featured on these pages were written by experts. They are **FREE** publications. To obtain them use the postcard bound into this issue.

## Catching Man-Hour Thieves:

**How to Catch Man-Hour Thieves**—Informative catalog published by Towmotor Corp. Tells you that the bandits in your plant are: improper loading, improper unloading, improper in-plant movement of material, improper storage, and improper lifting. Tells how to foil these thieves and collect rewards waiting for you.

With the above booklet you can also get a material handling check list designed by Towmotor to help you to uncover man-hour waste in every department in your plant.

Circle No. 195 on Reader Service Card for more information

## Meeting Government Specs for Tape:

**Government Specification Manual**—Describes two dozen Scotch brand pressure-sensitive tapes that meet various government specifications. Contains complete data on tapes made by Minnesota Mining & Mfg. Co. for packaging, holding, mending, masking, sealing, mounting, protecting, insulating, and splicing jobs.

Circle No. 196 on Reader Service Card for more information

## Selecting the Right Wheel or Caster:

**Aluminum Industrial Wheels and Casters**—24-page catalog published by Aerol Co., Inc. Explains the construction of Aerol wheels and casters, and presents complete specifications for each type. Designed to help you select the right item for your requirements.

Circle No. 197 on Reader Service Card for more information

## Operating Electric Trucks Continuously:

**Ready-Power For Electric Industrial Trucks**—Bulletin No. 99 of Ready-Power Co. tells about this company's continuous-duty power units. Illustrates gas-electric and diesel-electric models in sizes and rating for all types, sizes and makes of trucks. Also includes many application pictures.

Circle No. 198 on Reader Service Card for more information

## Towing Industrial Trailer Trains:

**Worksaver Specification Sheet**—Four-page folder published by Yale & Towne Mfg. Co., describes the Worksaver Heavy Duty Electric Tractor. Capacity of tractor is 200 lb., normal draw bar pull, and 700 lb. maximum. Folder gives other specs and lists outstanding features.

Circle No. 199 on Reader Service Card for more information

## Handling Heavy, Hot, Abrasive Materials:

**Hinged Steel Belt**—Four-page bulletin describes May-Fran Co.'s hinged steel conveyor belt for handling metal scrap, hot forgings, flash, wet or dry metal chips and turnings as well as other sharp or abrasive materials. Contains photographs showing details of construction as well as the various parts comprising the belt.

Circle No. 200 on Reader Service Card for more information

## Using Rubber Belting:

**Quaker Conveyor Belting**—Four-page folder published by Quaker Rubber Corp. shows in close detail, the construction of 10 different types of belting they make. A page of this folder is devoted to "How to get the most out of conveyor belting."

Circle No. 201 on Reader Service Card for more information

## Reducing Speeds Efficiently:

**Bulletin A-614 of Dodge Mfg. Corp.**—Describes and explains operation of complete line of speed reducers made by Dodge. Covers units for output speeds from 12 to 330 rpm and for capacities varying from one hp to 43 hp. 24 pages in length.

Circle No. 202 on Reader Service Card for more information



### Cutting Unloading Costs:

Job Study No. 115—Towmotor Corp. tells how unloading costs were cut 92% at P. Lorillard Co. Presents problems which confronted the tobacco company, and then tells how they were solved. Gives savings which resulted in each case.

Circle No. 203 on Reader Service Card

### Tiering in Congested Areas:

Raymond Straddle-Type Tiering Truck—a data sheet now being distributed by The Raymond Corp. Describes the company's 2000 lb. capacity tiering truck which is said to eliminate counter-weight, and to tier from six ft. aisles. Gives complete specifications.

Circle No. 204 on Reader Service Card

### Handling All Types of Materials:

Reference Catalog—A 44-page product catalog available from Mercury Mfg. Co. Includes the company's entire line of current model tractors, trailer, fork lift trucks, platform lift trucks, and load carrying trucks. Divided into three main categories: The Trackless-Train System; The fork Truck-Pallet System; and The Lift Truck-Skid System.

Circle No. 205 on Reader Service Card

### Using Gravity Wheel Conveyors:

Ferguson Streamliner Gravity Wheel Conveyors—H. J. Ferguson Co. gives descriptive data. Conveyors are available from 12 in. to 24 in. in widths and with as few as six wheels to as many as 18 wheels per ft. Illustrations show standard and special applications.

Circle No. 206 on Reader Service Card

### Handling During Production:

Brusco Handling Equipment—Bulletin 500 of Brummeler Steel Products Corp. Presents a complete line of parts boxes. Shows each type of box, gives brief description of them, tells where they should be used.

Circle No. 207 on Reader Service Card

### Engineering Conveyor Systems:

Mathews Conveyor Co. Catalog—intended to define the scope of the engineering and manufacturing operations of Mathews Conveyor Co. Shows on-the-job shots of roller conveyors, wheel conveyors, belt conveyors, live roller conveyors, chain conveyors, overhead trolley conveyors, elevating conveyors, and other items the company makes.

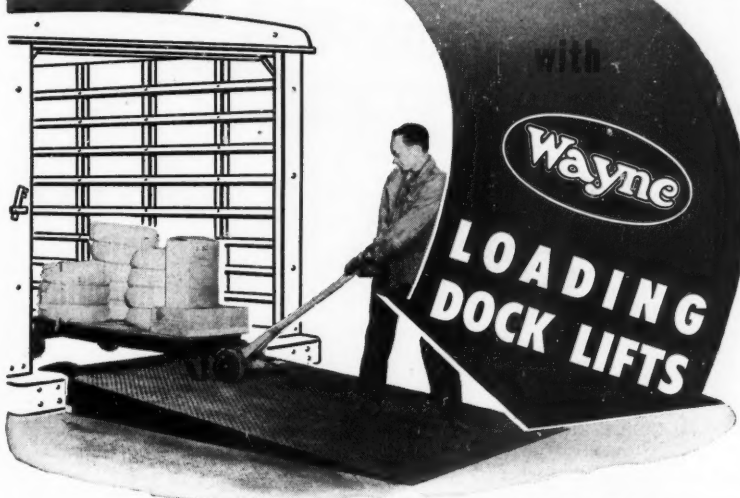
Circle No. 208 on Reader Service Card

### Using Cushion Seats on Trucks and Tractors:

Seat Engineering and Manufacturing—A complete catalog covering standard and new seats which have been added to the line manufactured by Milsco Mfg. Co. Includes dimensional layout sketches said to be useful to engineers in planning seating requirements. Tells about various cushioning materials which are available.

Circle No. 209 on Reader Service Card

## CUT HANDLING COSTS...SPEED LOADING



### TILT TO MEET LOAD... CUT LOADING TIME IN HALF

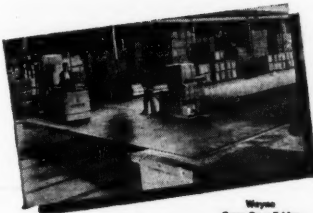
Unloading raw materials... loading finished products just back up truck and loading dock lift is adjusted to correct height... industrial trucks to roll on and off easily. No chain lifts, pry bars or costly manual labor necessary. Wayne Dock Lifts do it all... with valve or push button control of quick acting hydraulic system. Adjusts to any height.

From loading docks to production line, there's a Wayne Industrial Lift to save time, labor and money. Wayne Lifts include ramps, sidewalk elevators, material lifts, cross over bridges, service lifts and others. Every one custom engineered to the needs of your plant. Designed and built to help you safely move materials faster and at lower costs. Write for Wayne Industrial Lift booklet.

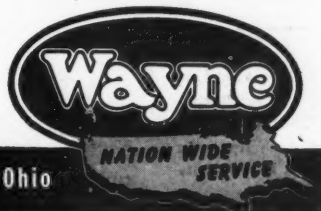
**THE WAYNE PUMP COMPANY**  
SALISBURY, MARYLAND • TORONTO, CANADA



Wayne Materials Lift



Wayne Cross-Over Bridge



WAYNE LIFT DIVISION, Ironton, Ohio

Circle No. 52 on Reader Service Card for more information

### Transporting Vertically:

Booklet B-4585 — Westinghouse Electric Corp. has published the 1952 edition of the Westinghouse vertical transportation booklet. Covers items like elevators, electric stairways, and associated control systems. All types of control systems for passenger and freight elevators are discussed in the 20-page booklet. Detailed dimensioned layout drawings are included.

Circle No. 210 on Reader Service Card

### Buying Casters and Trucks:

Rapistan Caster and Truck Catalog — Fully indexed 36-page catalog published by Rapids-Standard Co., Inc. Contains photos and complete specs on casters and wheels designed to handle light, medium or heavy loads on all types of floor surfaces. Wheel-Ezy hand trucks and stock trucks are also pictured and described.

Circle No. 211 on Reader Service Card

### Using Industrial Tractors:

"Allis-Chalmers Presents"—A colorful bulletin in which Allis-Chalmers Tractor Division presents its complete line of tractors. Also describes the company's motor graders and attachments. For each machine shown, specifications and a listing of outstanding features are given.

Circle No. 212 on Reader Service Card

### Moving Loads in Tight Spots:

Spec Sheet—Towmotor Corp. gives details of the Towmotor Side Shifter, a standard accessory for fork trucks. Tells about usefulness in freight car handling because of lateral travel of 3½ in. to either side of center.

Circle No. 213 on Reader Service Card

### Handling With Fork Trucks:

Bulletin 1579—The Buda Co. tells about model FT30-24 gasoline powered truck and model FTD30-24 Diesel powered fork lift trucks in this four-page folder. Both trucks have a 3000 lb. capacity at 24 in load center. Engineering drawings and specifications are included.

Circle No. 214 on Reader Service Card

### Using Crawler Cranes:

Catalog No. 700-G-21—American Hoist & Derrick Co., describes its ¾ yd. crawler crane and shows action views of the machine. Points up availability of interchangeable fronts—crane, shovel, dragline, or pull shovel, and lists overall specs.

Circle No. 215 on Reader Service Card

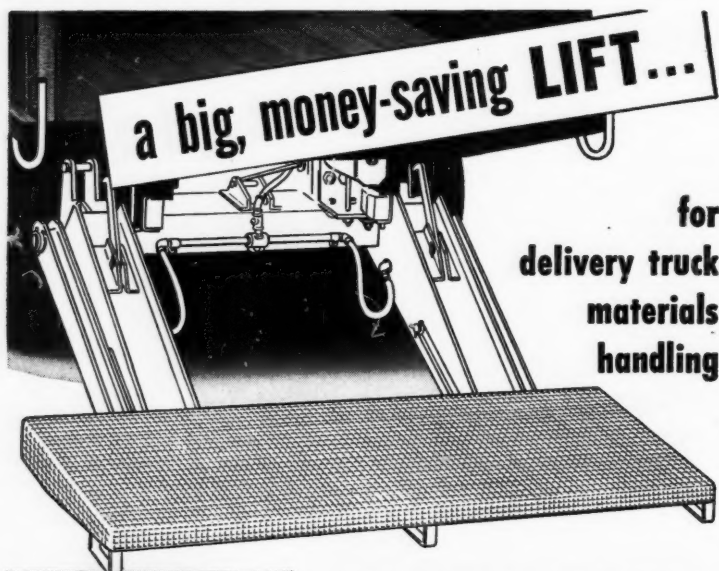
### Handling Overhead:

Keystone Junior Conveyors—Light duty overhead conveyors for carrying material through various cleaning, painting and drying operations. Can be built from floor supports and can be readily moved to new locations. Literature, published by Keystone Conveyor Co. contains engineering drawings and specifications.

Circle No. 216 on Reader Service Card

### Handling Bulk Material:

Data Sheet—Published by Getman Brothers Mfg. Div. Tells about the




The Hercules Load-N-Gate lifts, lowers or holds stationary loads with effortless ease.

#### PLUS-PROFIT FEATURES

- Safety-tread, non-skid platform
- Exclusive power in both arms handles off-center loads without strain
- Single lever control operated at rear from either side of platform
- Extends only 4½" below chassis frame

## HERCULES Hydraulic Load-N-Gate

Whatever the load—crates, kegs, drums, boxes—you can get it on the truck and off faster, safer and at less cost with a powerful, hydraulically operated Hercules Load-N-Gate. Easily installed on any standard size truck, the Load-N-Gate will pay for itself in a short time in eliminating costly, time-consuming and dangerous loading and unloading by hand. Mail the coupon below now for free literature.



Please send me literature on the Hercules Hydraulic Load-N-Gate

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Scoot-Crete Junior, a powered barrow said to be ideal for small contractors or industrial plants. Unit carries a ton, turns in its own length, can use interchangeable platform or dump box.

Circle No. 217 on Reader Service Card

### Using Strip Steel in Shipping:

Confab — External publication of Acme Steel Co. contains informative articles on strip steel products used in shipping. One article tells how a carload shipper of waxed paper reduced damage by using bracing with steel strapping. Another outlines key steps to follow to keep flat wire stitching machines at peak efficiency for carton closure operations.

Circle No. 218 on Reader Service Card

### Protecting Shipments:

"Protective Paper Products" Three-color folder available from National Waterproof Papers Inc. Includes full information on Natco multi-wall shipping bags, carload retaining paper, spiral wrapping paper and a wide variety of custom-made liners and specialties, all made of creped kraft. Illustrations show uses in different industries.

Circle No. 219 on Reader Service Card

### Writing on Pressure Sensitive Tape:

"Write on It"—Folder from Label-on Tape Co. tells the story of its pressure sensitive plastic tape you can write on. Claimed to be resistant to dirt, oil, water, acids and unaffected by temperatures from -40° to 160° F. Sample included.

Circle No. 220 on Reader Service Card

### Applying Tubular Conveyors:

Hapman Tubular Conveyors—Tells how Hapman Conveyors can be used to move almost any flowable material—wet or dry—through any plane or

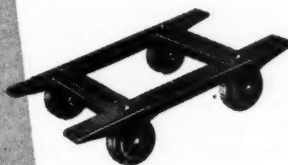
## Special TYPES ARE STANDARD at Fairbanks

**HAND TRUCKS** of special design required for many industries are run-of-the-mill stock items in the Fairbanks catalog. There's a type for every need . . . of sturdy design, high grade materials . . . and built to last. Here are some typical examples. If you don't see what **YOU** need—ask for it.



**Fig. A-1448 All Steel UTILITY HANDTRUCK**

Ideal for bags, cartons, cases and small kegs. Solid nose plate, curved cross bars, welded center strap; fitted with step climbers. Load rating 400-500 pounds.



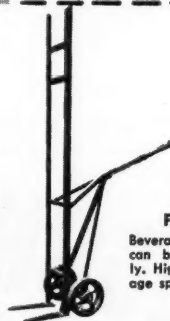
**Fig. L 1191 Malleable Iron CASE TRUCK**

Built to take the shock of heavy packing cases, boxes and machinery. Indestructible yet light in weight. One ton capacity.



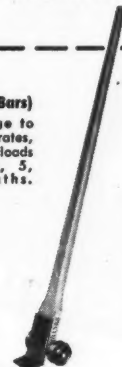
**Lever Trucks (Pry-Bars)**

Tremendous leverage to handle heavy cases, crates, machines, etc. Raises loads 9" from the floor, 5, 6 and 7-foot lengths.



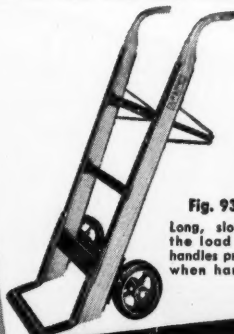
**Fig. CC-10 TIER TRUCK**

Beverages, cartons and crates can be handled more efficiently. High stacking cuts down storage space. Capacity 750 pounds.



**Fig. 500 JACK and PLATFORM TRUCK**

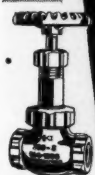
Efficient, low cost lift jack and platform system increases production, cuts costs. Many standard platform sizes available; special sizes to order.



**Fig. 9304 HAND TRUCK**

Long, sloping lines "break" the load easily. Steam-bent handles prevent crushed fingers when handling large cases.





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angle. Gives a long list of products now being moved successfully with these conveyors.

Circle No. 221 on Reader Service Card

### Moving With Winches:

Low-Mount Winches—Discussed in a data sheet available from Gar Wood Industries. Two winches are covered; 2U which weighs 330 lb., has a rating of 15,000 lb., and the 3U which weighs 375 lb. and has a 20,000 lb. rating.

Circle No. 222 on Reader Service Card

### Handling With Fork Trucks:

"Serves You Right"—Special issue of Clark Equipment Co's Material Handling News. Tells how Clark serves you right in getting the most for your money, in getting quality of product, in technical counsel, in trained personnel, in unique experience, and in coast to coast service. Tells how to get further valuable information.

Circle No. 223 on Reader Service Card

### Weighing While Lifting:

"The Martin-Decker Lift Truck Scales"—Data sheet from Martin Decker Corp. gives details of 16,000 lb. capacity scale designed for use with any hydraulic cylinder type lift truck. Helps to insure legal load every time, reduce accidents, prevents damage to equipment according to the literature.

Circle No. 224 on Reader Service Card

### Planning Material Handling Systems:

Four-page folder—offered by Palmer-Bee Co. Explains the company's services to industry. Lists many types of equipment available for economical and efficient handling of materials in mass production industries.

Circle No. 225 on Reader Service Card

### Handling During Production:

"Aids to Modern Industry"—Booklet published by Klaas Machine & Manufacturing Co. illustrates conveyors, shop trucks, racks and containers used in production. Tells how Klaas devices can be useful in filling unusual requirements.

Circle No. 226 on Reader Service Card

### Selecting Conveyor Chain:

Four-page folder—Describes Acmor Hollow Pin Conveyor Chain made by Acmor Conveyor Chain Co. Lists and describes features like: flexibility through ease of attaching carriers; large glass-hard bearing areas; low weight, high strength, accurate pitch; ease of replacement and repair.

Circle No. 227 on Reader Service Card

### Using Tractor Tools:

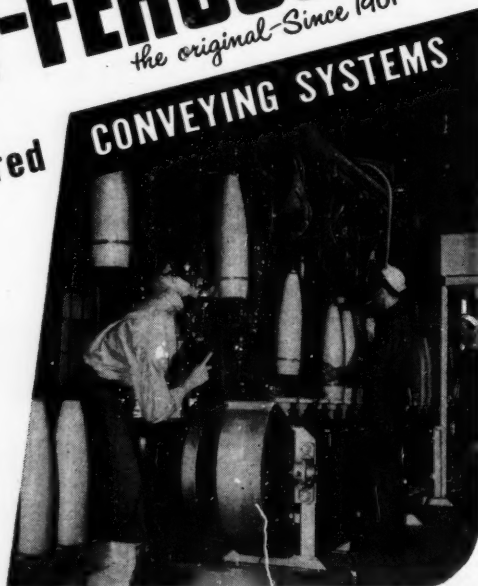
"A Story of Tractor Tools and Their Uses"—Cartoon-style brochure published by the Hyster Co. Illustrates the use of tractor-mounted tools in all basic industries such as railroading, construction, light and heavy logging, farming, mining, oil and gas and governmental projects.

Circle No. 228 on Reader Service Card



THE "HEART" OF CINCINNATI is famous Fountain Square. The pulsating "life blood" of the city, however, flows from its famous industries, which generation after generation have produced fine quality machine tools, pianos, ink, soap, radios, television sets and conveying systems—A-F Engineered Completely Co-ordinated Conveying Systems!

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### Using Electric Motors:

Booklet B-4769—contains over 100 case histories of outstanding applications of Westinghouse Life-Line Motors. Case histories represent practically every phase of industry, including chemical, textile, petroleum, lumber, metalworking, paper, food, mining, and machine and production tool industries. Gives particular application problems involved for each installation.

Circle No. 229 on Reader Service Card

### Opening and Closing Balky Freight Car Doors:

The E-Z Way Mechanical Device—specification sheet available from Penco Engineering Co. Describes the Penco freight car door opener. Weighing only 34 lb., the opener uses a jack-action thrust and holding cam which exerts a smooth constant 4000 lb. horizontal pressure upward or downward. Designed to fit all car doors.

Circle No. 230 on Reader Service Card

### Handling With Fork Trucks:

The Lever—Monthly publication of Lewis-Shepard Products Inc. Presents new product news of the company as it occurs, shows how to use fork trucks in many industries. Also contains case studies of other material handling equipment made by Lewis-Shepard.

Circle No. 231 on Reader Service Card

### Strapping Cartons:

A Real Bread-Winner—published by Gerrard Steel Strapping Co. Economies which a bread maker has realized through use of steel strapping in closing cartons containing bread. Also tells how these same economies can be had in other industries.

Circle No. 232 on Reader Service Card

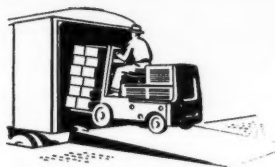
### Loading Coal:

"Pettibone Mulliken Products"—Eight-page bulletin on various models of coal loaders made by George Haiss Mfg. Co., Inc., Division of Pettibone Mulliken Corp. Also contains illustrations of other handling devices manufactured by the company.

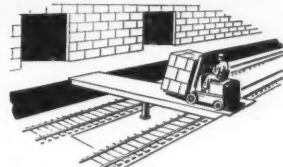
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Equipped with steel wheel or wheel with zero pressure or pneumatic tire.



Model C5W with Pneumatic Tired Wheel and Wood Frame.

STERLING WHEELBARROW CO., Milwaukee 14, Wis.

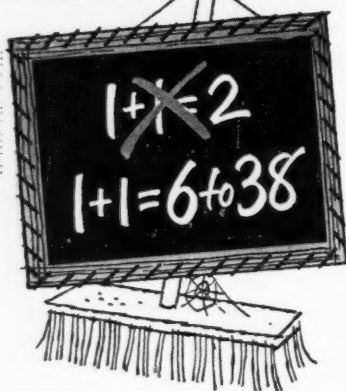
**Sterling**  
WHEELBARROWS



Look for this Mark of STERLING Quality

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# Yes Sir!



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1 man plus 1 Wilshire Power Sweeper sweeps 6 to 38 times faster than 1 man plus 1 broom. And Wilshire not only sweeps faster...it sweeps cleaner and without dust...inside and outside...wherever a man can handle a broom.



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In hundreds of companies in over 100 different industries, as well as in large cities and small communities, WILSHIRE Power Sweepers are cutting sweeping costs an average of 75%...even where only 1 broom-pusher formerly was used full-time.

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Circle No. 58 on Reader Service Card

## Preventing Rust

Anti-Rust paints are described in a bulletin recently published by the Paint Corp. of America. Listed are the features of PCA-100 Black and PCA-101 Clear anti-rust paints. Also included is complete price information.

Circle No. 234 on Reader Service Card



## Small Parts Handling System

Simplicity, flexibility, and economy of operation are claimed for the Wesling System of handling small parts. The system is based on a master hardwood tray unit which affords support for parts being loaded, easy drainage of liquids, and free passage of air. Albert Wesling & Sons, Inc. tells about it in a four-page folder.

Circle No. 235 on Reader Service Card

## Handling Drums and Barrels:

Drumobile Datasheet—describes device for lifting and carrying drums or barrels up to 350 lb. in complete safety. States that hands never touch drum and they need not be tipped for lifting. Suggested for use in large or small plants. Can be used for handling scrap and sweepings in drums, for punch press parts, screw machine parts, paints, lacquers, oils, and any product which can be placed in drums or barrels.

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## Fork Truck Procedures . . .

Continued from page 59

### Proper Movement of Loads

When starting to move the fork truck with a load, all speeds should be used. The controller handle should not be thrown into top speed immediately. When stopping, however, the controller should be quickly returned to neutral to avoid dangerous arcing. The truck should not be driven in an unsafe condition. Any mechanical or electrical deficiency should be reported to the proper authority immediately.

Care must be taken to prevent the loaded truck from passing over chips, oil, materials in process or other obstructions. Dirty floors should be reported to those responsible. Aisles should be marked with contrasting stripes and kept clear at all times. Care should be taken to prevent bumping into objects. This is especially so when backing or turning the loaded truck. During travel, any tracks encountered should be crossed on a diagonal and the operator should keep a firm grip on the steering control. At the same time, when approaching elevators, travelling near pits or down inclines, the truck speed should always be reduced.

When approaching or passing noisy machines, extra operator care is called for to avoid distraction. The horn or warning signal with which the unit is equipped should be used only when required but the operator should be certain that his warning was sensed.

The operator should travel with the load as close to the ground as possible to insure stability over rough roads and also while making turns. When carrying loads at high-lift on telescopic fork truck models, it is necessary to watch the overhead obstructions and be certain that sufficient clearance is available.

### General Safety Precautions

Operator safety is most often dictated by common sense. Some of the more common violations are cited here to accentuate the seeming unimportance of conditions which may result in accidents. When the truck loading is such as to obstruct the operator's view, the truck should be operated in reverse.

The operator should never attempt to drive a truck with wet or greasy hands. Also, no riders should ever be

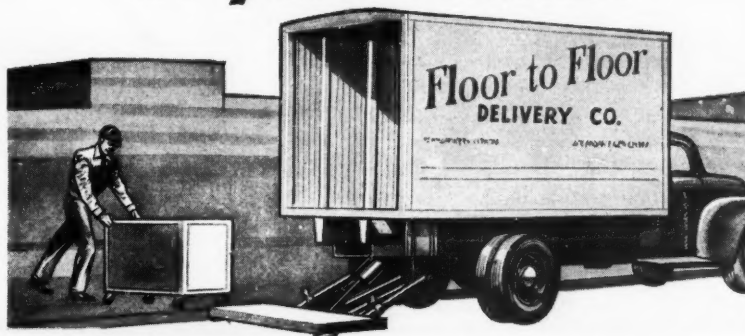
permitted on a unit. The operator should take care to keep all parts of his body inside the confines of the truck and at the same time, should never attempt to maneuver too close to pedestrians or other trucks.

Equal in importance to the location of the load, is the amount of the load. The operator should be aware of the maximum safe-loading capacity of his unit and take care not to exceed this established safe limit. When carrying loads at or near this maximum limit, or when loads are being transported at high-lift on telescopic trucks,

extreme care should be taken in maneuvering the fork truck. Only first or second speed should be used and the floor should be smooth and level.

When loading into highway trucks or trailers, be sure that the receiving unit brakes are set and wheels are blocked. If the springs are weak, the body should be supported with jacks or braces. Also, inspect all car, truck and trailer floors carefully before entering with a fork truck. The operator should be certain that the floors are strong enough to support the weight of the fork truck plus the load.

## Double the earnings of your trucks!

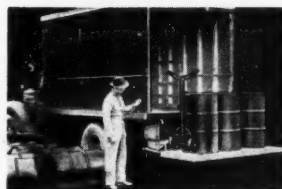


### ANTHONY "LIFT GATES" CUT LOADING and UNLOADING TIME IN HALF!

More trips per day . . .

Anthony Lift Gates have proved to the shrewdest truck operators in over 58 totally different industries, from Pie Bakeries to Steel Mills handling everything from diapers to dynamite, that they drastically cut operating costs . . . slashing them as much as 50%. Loading and unloading time is reduced to a fraction of the usual time. Practically doubles the number of daily deliveries. Greatest efficiency and savings are secured only by using the "type" of gate most practical for your specific loading and handling requirements. *Anthony Lift Gates* are available in all 3 types to fit the many specialized needs—and you have a choice of "Hydro Power" Closing or "Spring Powered" Closing.

Write for "The Facts About Lift Gates" which explains the advantages of each type—there is no obligation.



"General Purpose" type



"Ramp" type



"Pick-Up" type

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LIFT GATE  
SYSTEMS

ANTHONY CO., Streator, Illinois

SEE YOUR NEAREST DISTRIBUTOR OR WRITE DEPT. 2404

Circle No. 60 on Reader Service Card for more information





## Steel strapping service like this prevents shipping damage

**H**ERE Cliff Onthank, Brainard salesman in Grand Rapids, shows a customer's shipping man how to apply the Brainard Strapping System to make a "floating load" shipment in a boxcar. By strapping all the cartons in a shipment together, the entire load can shift as a unit during impact, and thus avoid damage.

The proper application of steel strapping is just as important as the strap-

ping itself . . . that's why *demonstration* is a key part of Cliff Onthank's job. Like his fellow Brainard salesmen, he has the experience and know-how to give you all-round good service.

To improve your shipping and materials-handling operations, give your problems to your Brainard salesman . . . offices located throughout the U.S. In Canada, P. J. McArthur Company, Toronto.



COMPLETE STEEL STRAPPING SERVICE, LIGHT AND HEAVY DUTY STRAPPING, TOOLS AND ACCESSORIES



WARREN, OHIO

For illustrated catalog write Brainard Steel Division,  
Sharon Steel Corporation, Dept. K-8,  
Griswold Street, Warren, Ohio.

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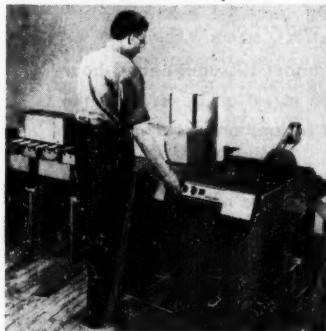
# PACKAGING and SHIPPING SECTION

Packaging Made Part of Production .....	92
Inclined Racks Solve Inventory Deterioration Problem .....	98
Applying Chain Conveyors to Packaging and Shipping Problems .....	102

## What's New in Packaging and Shipping Equipment?

### High Speed Strapping Machine—Acme Steel Co.

Acme Steel Co. reports that this power driven strapping machine is designed to speed high-volume flat steel strapping operations and reduce operator fatigue. It produces strap joints by spot welding. It is said that the machine can accommodate many different package sizes, and that



there is no limit to the amount of strap that can be fed or the amount of slack that can be taken up. The machine's 31-in. table height permits it to be installed in standard-height conveyor systems. Considering overall dimensions, the machine is 43 1/8 in.

wide by 45 in. deep by 47 in. high. It weighs 1350 lb. It is electrically powered and electronically controlled. Can be furnished for strap sizes in widths of 3/8, 1/2, 5/8, and 3/4 in.

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### Versatile Hand Printer—Weber Addressing Co.

The Weber Addressing Machine Co. reports that its Web-O-Print is soft enough to print anywhere, on wood,

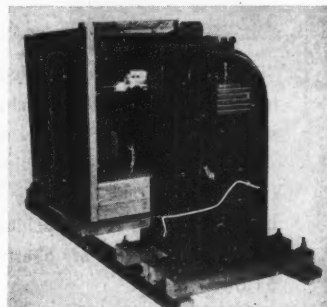
paper, cloth, tags, or cylindrical objects. Stencils are easily attached or removed in one second, it is claimed. The printer will duplicate from type, a sketch or writing.

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### Package for 3600 lb. Lathe—Gaylord Container Corp.

A new packaging technique for protection and shipment of a 3600 lb. engine lathe has been developed by Gaylord Container Corp. with Cincinnati Metalcrafts, Inc. It is claimed that this method of packaging saves 50%

to 75% in costs and 55% in weight of the package. Package consists of a solid fibre container which completely encloses the lathe. Fibre is stapled to a wooden frame bridging the center of the lathe and to the skid. Then a lid is attached to the top of the container. The package is peaked in the center to shed showers.



Circle No. 242 on Reader Service Card for more information

Turn to page 108



Harrison  
saves  
**\$28,000**  
per year



Kitchen wall, sink and base cabinets like these are shipped in corrugated cartons closed by International Staplers.

## with International Carton Stapling Machines



\$28,000 saved in a year . . . \$112,000 in the last four years! Unbelievable? Chester C. Cain, executive vice president of Harrison Steel Cabinet Co., Chicago, found it hard to believe, too. But read what he has to say:

"Four years ago we installed two International Retractable Anvil Stapling Machines to close corrugated shipping cartons for our line of kitchen wall cabinets, sink cabinets and base cabinets. We staple the tops and bottoms simultaneously after the cabinets are in the cartons. The machines . . . one for regular production . . . one for overflow production . . . cost \$1,640 each.

"A year later, figures showed our packaging costs had gone down \$28,000. Working conditions were easier for our men . . . and the equipment had paid for itself in only a month and a half.

"Formerly, we packaged about 300 units each 8-hour day, using 13 or 14 men to set up boxes, seal the bottoms, place cabinets inside, and seal the tops.

"Now with only 6 men . . . one to operate the stapler, and the rest to pack and feed, we're closing 600 cartons each 8-hour day . . . twice as many, and the closures are better."

*If you ship in corrugated or fibre containers, an International Retractable Anvil Stapling Machine can close them better, faster and more economically. Write for detailed information.*

a seal of security



**INTERNATIONAL STAPLING MACHINES**

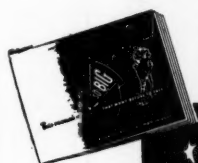
International Staple & Machine Company  
808 East Herrin Street, Herrin, Illinois

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## HE'S DISCOVERED THE STARS THAT ANSWER HIS PACKAGING PROBLEMS

Remember this bar and five stars . . . it's the trade-mark of General Engineered Shipping Containers. It's your positive assurance of a light-weight, extra strong shipping container that is designed by our engineers to meet a specific need . . . a container that is "Part of the Product." If you have a packing problem . . . if you too want to cut packing and shipping costs . . . write us. Our Designing and Testing Laboratories will be glad to design a good-looking, efficient, and more economical container for *your* product. Write us TODAY.



Send for your **free** copy of "The General Box."  
It shows how you too can cut container costs.



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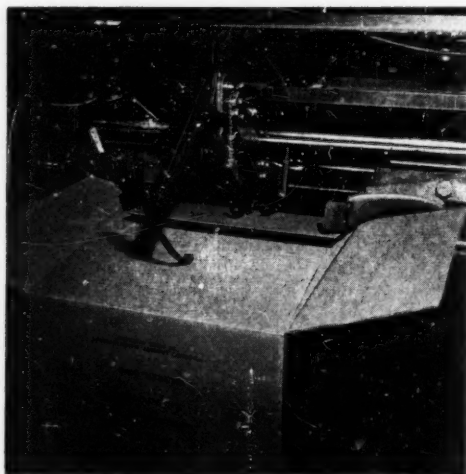
General  
Watkins-  
Type  
Box



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# Packaging Made Part

## GLUING

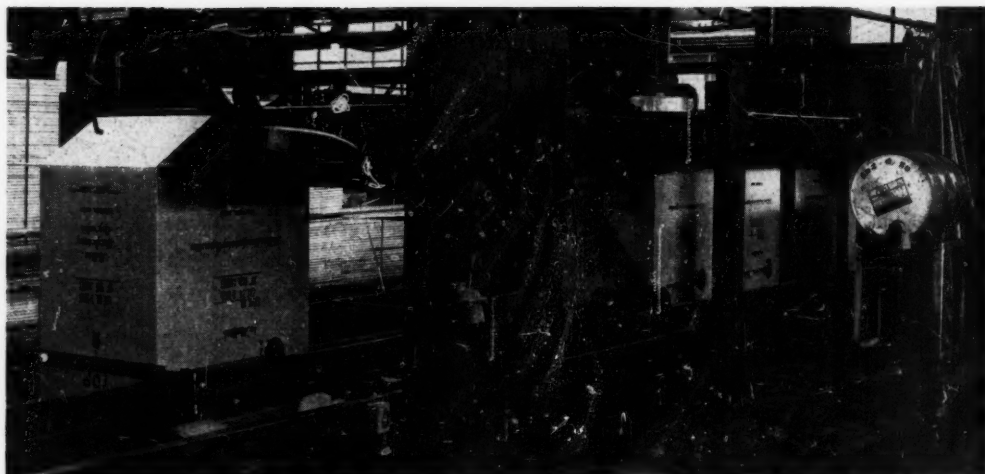


The incorporation of packaging and closing operations as part of production lines has paid off in time savings, more permanent closures, neater packages, and less damage to products in transit, at Mullins, Mfg. Corp., Warren, Ohio. Part of the reason this manufacturer of kitchen cabinets and sinks has been able to combine operations successfully has been the use of automatic gluing equipment and stitching equipment.

### How Gluing Machines Are Employed

An automatic gluing machine is used on the final assembly line for base cabinets of Youngstown Kitchens.

**OUTER FLAPS** opened flat by guides on the gluing machine. Arms hold inner flaps in closed position. Glue is rolled on outer flaps and they are then closed and sealed automatically. Meanwhile, the bottom of the carton is being closed and sealed in a similar manner.



**240 CARTONS PER HR.** can be run through the gluing machine when it is being operated at full capacity. Note that both the top and bottom flaps are being positioned for application of glue. After closing and sealing, cartons move directly onto conveyors and are carried to proper storage

area for the size base cabinet enclosed, or to shipping department. Previously, carton closure was done by a method requiring considerable manual effort. It was much slower, cartons did not look as neat when completed, material was wasted, fatigue cut operators' efficiency.



rt

# of Production

Here, cabinet parts, conveyed from painting booths are assembled. Handles, bumpers, and other hardware are installed. Protective cover pads are screwed to the tops of cabinets, which are then placed in cartons, and turned over. Protective pads are then put on the bottoms. In this upside position, the cartons move into a gluing machine which can be adjusted to handle seven different size cartons from 15" x 24" x 36", to 36" x 24" x 36". Both tops and bottoms are glued and closed simultaneously in the gluer at

Turn to Page 104

Cuts Costs

Speeds Operations

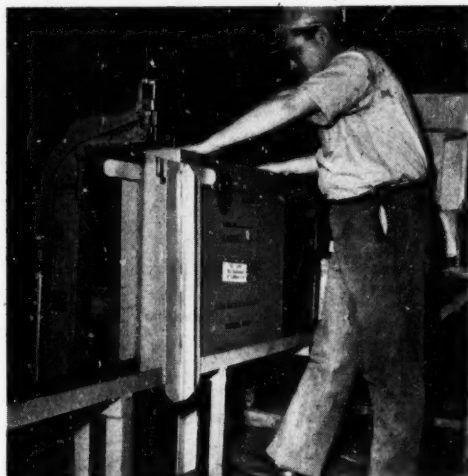
Reduces Fatigue

Eliminates Handling

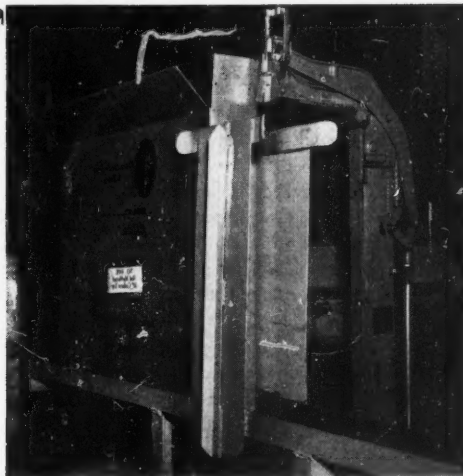
## STAPLING



**PLATFORM TRUCKS** are placed behind operator at stitcher to receive closed cartons. Method has cut material costs by about  $\frac{1}{3}$ . Packages are neater, and stronger, and meet specifications of railroads and other carriers.



**STITCHING MACHINE** is placed at end of cartons containing cabinet tops for Youngstown assembly and packaging line to close narrow Kitchen units. Operator operates the stitching machine with a foot pedal.



**POSITIONING RACK** made by Mullins consists of a track made of  $\frac{1}{4}$  in. angle iron. Two vertical guides are welded to the track to center cartons and hold them in position as operator staples them closed.

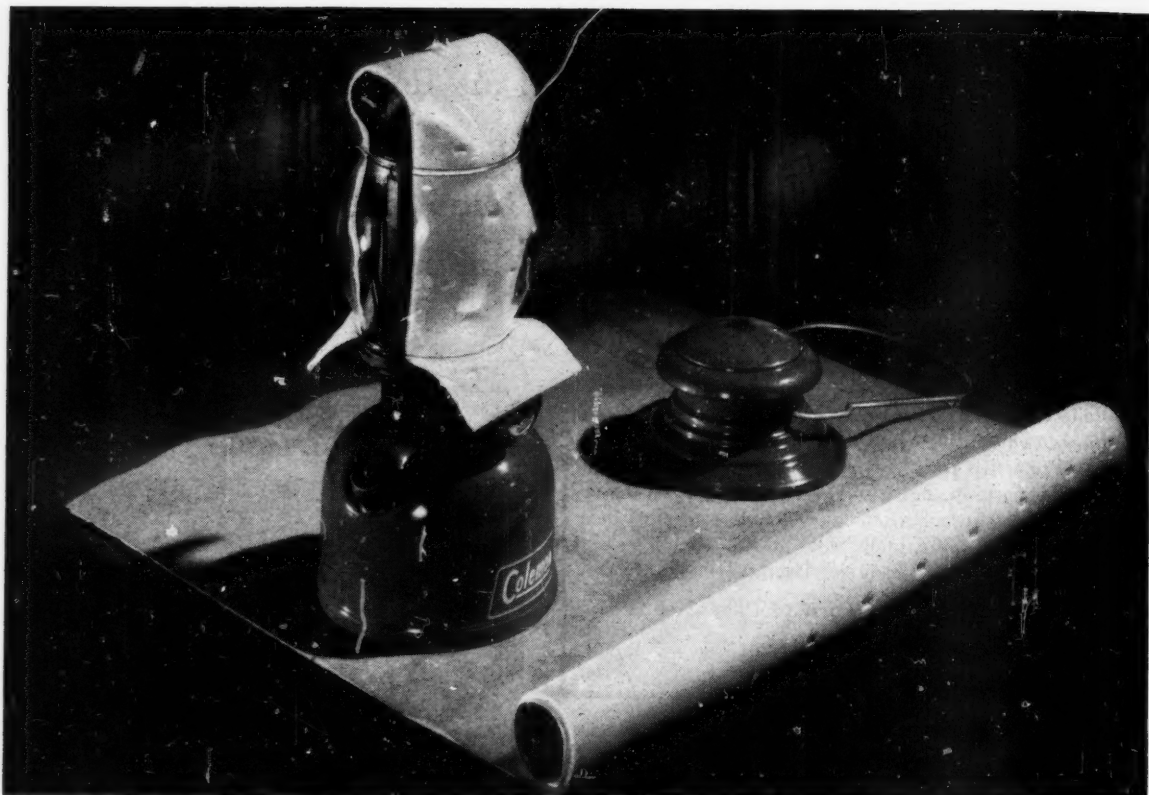


Photo courtesy of the Coleman Co., Wichita, Kansas

## Custom Protection — prevents shipping damage as no other packaging method known!

Does your present packaging material provide just the *right* amount of protection for your product? Is your packaging operation fast, easy—*economical*? As this illustration shows, the Coleman Company found a *common sense* answer in Kimberly-Clark Interior Packaging—KIMPAK.\* A modern packaging material of unlimited versatility that could be "tailored" to fit their specific needs.

KIMPAK is soft, grit-free, easy to apply as wrapping paper. It will absorb up to 16 times its own weight in moisture within 30 seconds—protect against shock, scratching, pressmarking, vibration. KIMPAK is feather-light, yet gives more protection than most materials of far greater weight and density. Many concerns have found this an important factor in reducing the size and weight of their packages to offset recent postal rate increases.

Regardless of the product you manufacture, KIMPAK—in rolls, sheets or pads—will give you maximum protection at lowest true cost. Today—investigate *custom protection* with KIMPAK. For complete information, write to Dept. B-8, Kimberly-Clark Corporation, Neenah, Wisconsin.



\*U. S. REG. U. S.  
• FOREIGN COUNTRIES

A Product of  
**Kimberly-Clark**

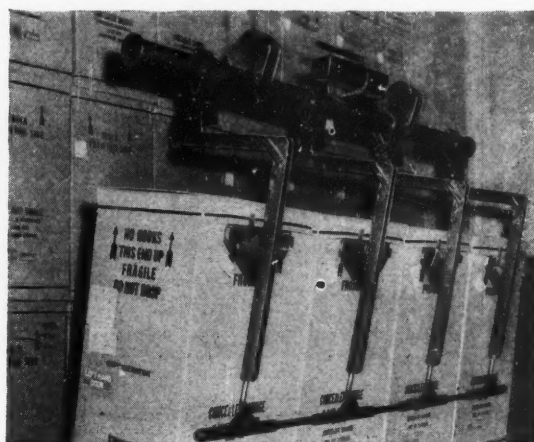
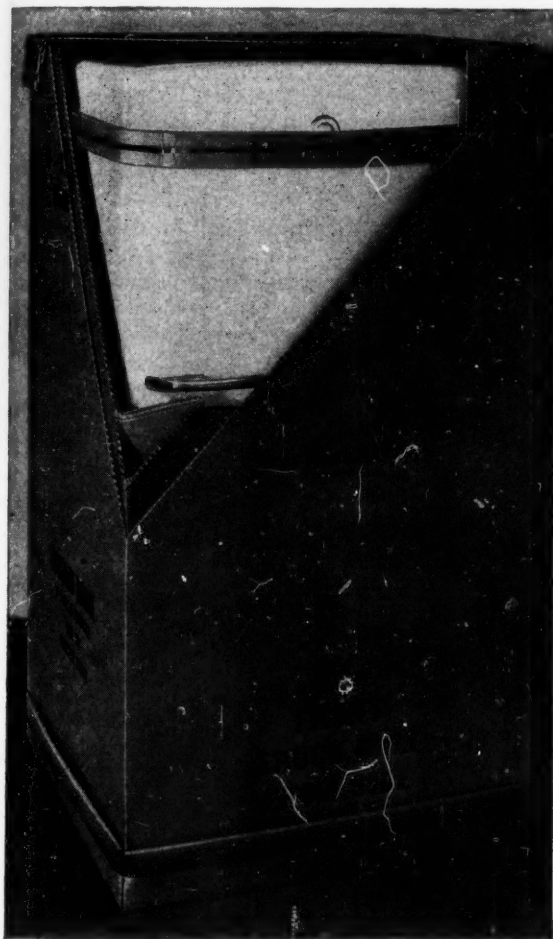
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# CUSTOM DESIGNED

## HEAVY-DUTY SHIPPING CONTAINERS

International's heavy-duty corrugated shipping containers are now being used for such products as stoves, water heaters, washing machines, refrigerators and furnaces. Each product presented its own individual packaging problems.



GENERAL ELECTRIC and our Container Division engineers designed and thoroughly tested this new package which provided better protection and enabled improvements in material handling methods. It was the first of our inter-locking TUBE-AND-CAP construction. Scored and folded corrugated sheets brace the refrigerator inside the outer container.

For lifting, a special fitting was developed to eliminate a fork: a U-shaped lip that hooked under the edge of the top cover. (See above) In G. E.'s warehouse 4 refrigerators are picked up at one time.

After thousands of successful carload shipments damage claims have been less than for the previous type of package. The corrugated fibre container is now used for all G. E. household refrigerators.

**International Paper company**

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Cleveland 13, Ohio  
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1126 Lincoln-Liberty Bldg.

Chicago 38, Ill.  
5133 West 65th St.

Springhill, Louisiana

St. Louis 11, Mo.  
7901 Michigan Ave.

New York 17, N. Y.  
220 East 42nd St.

Wooster, Ohio  
689 Palmer St.

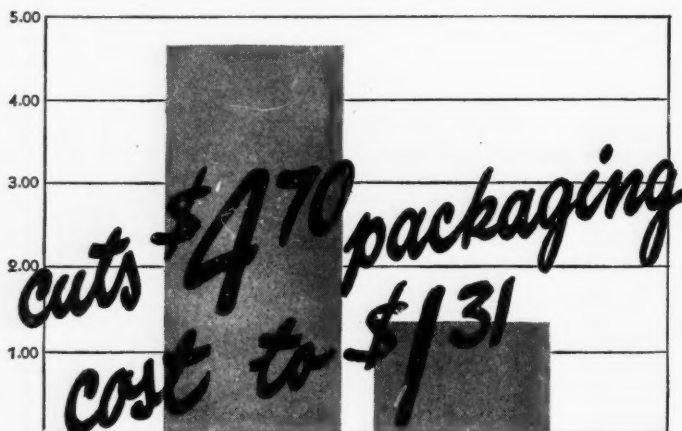
Georgetown, So. Carolina

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FLOW • AUGUST, 1952



## Vapor from paper STOPS RUST of diesel locomotive parts



A leading locomotive firm used to dip diesel cylinder heads in an inflammable cleansing liquid. Then moisture had to be removed. This called for cranes and fire precautions. Dried with an air hose, heads were dipped into a varnish-like solution. To keep the sticky coating in place, waxed paper and heavy wooden boxes were "musts". Unpacking involved the same troubles in reverse. A couple of hours with a scrubbing brush came before the heads could be installed.

Today, vapor from paper stops rust. It is Angier VPI\* Wrap. It gives off an invisible protective vapor that is clean... SAFE. As the vapor permeates into deepest cavities, both air and moisture are

made harmless to shiny cylinder heads. No grease or oil is necessary. Now packaging costs are down to \$1.31 from \$4.70. And this doesn't include an average freight savings of 24% on the thousands of different locomotive parts that now are VPI-protected. All parts are ready to use when received... a godsend to men in the repair shops. No bulky equipment is required, so valuable floor space is saved.

If you ship or store metal parts or products, Angier VPI Wrap is meant for you. It may be used as a box liner or an envelope as well as a container insert. For "VPI Facts", send coupon to...

NO OIL OR GOO...  
VPI Wrap inserted in  
container gives off  
vapor that STOPS RUST!



# Angier

The Most Experienced Name  
in Vapor Rust Preventives

Distributors in Principal Cities

\*® Vapor Rust Preventive

Angier Corp., Framingham 13, Mass.

Name.....

Title.....

(Clip this to your letterhead)

Please send "VPI Facts" as applied to:

- |                                                                                                |                                                                           |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> Machinery-Industrial, Metal Work-<br>ing, Farm, Office, Construction. | <input type="checkbox"/> Electrical Machinery,<br>Appliances, Products.   |
| <input type="checkbox"/> Transportation Equipment - Auto,<br>Aircraft, Naval, Railroad, etc.   | <input type="checkbox"/> Fabricated Products -<br>Culders, Hardware, etc. |
| <input type="checkbox"/> Steel in process of fabrication.                                      | <input type="checkbox"/> Ordnance Equipment.                              |
| <input type="checkbox"/> Instruments and clocks.                                               | <input type="checkbox"/> Other.                                           |

Circle No. 66 on Reader Service Card for more information

## PACKAGING & SHIPPING USEFUL LITERATURE

### Writing on Pressure Sensitive Tape:

"Write on It"—Folder from Label-on Tape Co. tells the story of its pressure sensitive plastic tape you can write on. Claimed to be resistant to dirt, oil, water, acids and unaffected by temperatures from -40° to 160° F. Sample included.

Circle No. 244 on Reader Service Card

### Shipping Bulk Material:

Summary of Information—A folder containing catalogs and descriptive literature on the Tote System of Tote Systems, Inc. Tells how this method of shipping can eliminate container cost, eliminate product loss, stop product contamination, reduce labor cost, reduce damage claims etc.

Circle No. 245 on Reader Service Card

### Protecting Shipments:

"Protective Paper Products" Three-color folder available from National Waterproof Papers Inc. Includes full information on Natco multi-wall shipping bags, carload retaining paper, spiral wrapping paper and a wide variety of custom-made liners and specialties, all made of creped kraft. Illustrations show uses in different industries.

Circle No. 246 on Reader Service Card

### Labeling Parts, Storage Bins, Shipments:

Descriptive Folder — tells about Mark-On Tape. A permanent, non-smudge tape said to be ideal for stockrooms, tool cribs, inspection departments, work-in-process labeling, shipping and many other uses. Small sample comes with the folder.

Circle No. 247 on Reader Service Card

Turn to page 100



PING  
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Label-  
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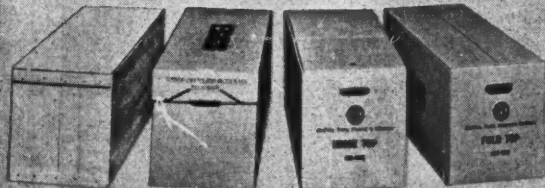
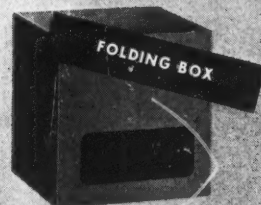
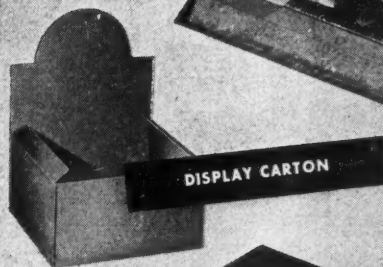
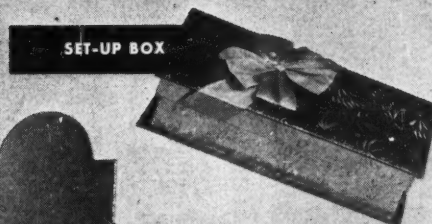
ce Card

FLOW

*At Your Service*

# CENTRAL FIBRE PRODUCTS CO., INC.

**Paperboard Materials  
Corrugated Containers  
Folding & Set-Up Boxes  
Produce House Supplies  
Expendable Fibre Pallets**



**MODERN PRODUCTS FOR  
BETTER PACKAGING AND  
SHIPPING — *and better selling!***

Circle No. 68 on Reader Service Card for more information

This Storage System Is  
Designed So That First Goods In . . .



**BOXED RUBBER HOSE** is raised to one of the upper tiers of the storage rack, is transferred from the portable elevator to a bin opening. The carton will ride on gravity roller conveyors (pitched) to the other side.



**REELS OF RUBBER HOSE** are likewise moved off the deck of portable elevator into storage. Reels ride on tracks through the rack. Note that the entire bin slopes down from this, the feeding side.

## FLOW SHIPPING REPORT

# Inclined Racks Solve Inventory Deterioration Problem

Do you have the problem of deterioration of goods in storage because "first-in" goods are often "last-out" because additional stock is placed in front of them? If you do, you'll be interested in a system that has been devised by the DeVilbiss Co., Toledo, for storage and order picking of its rubber hose. DeVilbiss customers are always assured of fresh products because its storage system uses the "first-in-first-out" principle.

The rack, located in the company's rubber mill, faces the shipping department with the rear of the rack near the boxing department.

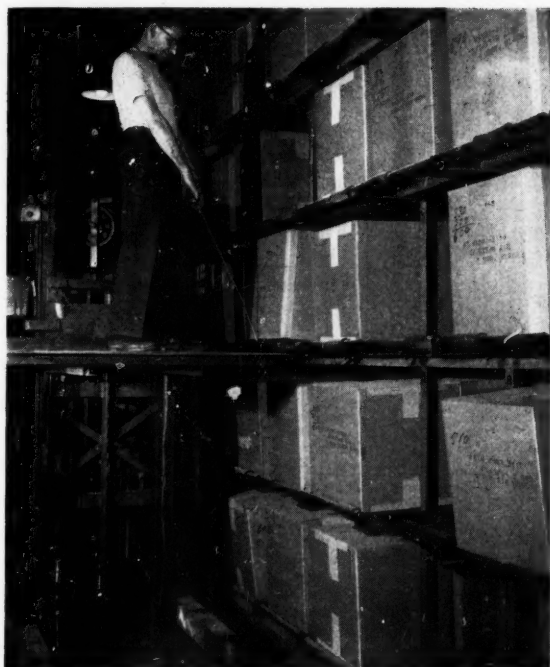
Hose, readied for shipment, is put on reels, smaller reels are boxed, larger units are shipped as is.

The rack, when loaded to capacity, will hold about 1,000,000 ft. of hose, is designed to conserve space and to keep the hose moving from boxing to shipping.

Each bin is designated for a certain type and size of hose enabling the shipping clerk to fill orders promptly. The base of the bins holding boxes is a roller conveyor pitched at a slight angle so gravity can move the loads from the feed to the discharge end. The bins holding wooden reels have tracks which also are pitched slightly to serve the same purpose.

To load bins near the top of the rack, and to facilitate handling the oftentimes heavy loads, an electric portable elevator is used. The shipping department uses a similar lifting unit on the other side of the rack to remove loads from upper tiers.

... Are First Goods Out —  
There Is No Deterioration



**REMOVING FROM STORAGE:** a shipping clerk uses a hook to lift a carton from the gravity storage rack. Guards built slightly higher than the roller conveyor at the base of each bin prevent boxes from toppling.

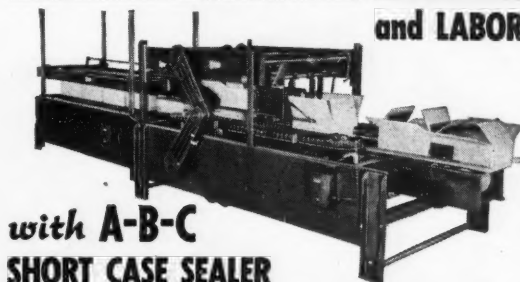


**REELS ARE REMOVED** in the same manner from the discharge side. Thus, DeVilbiss assures its customers of a fresh product since first products in are first products out. There is no deterioration, waste.

Circle No. 69 on Reader Service Card for more information



**Save  
FLOOR SPACE  
and LABOR**

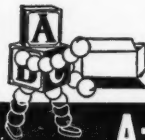


**with A-B-C  
SHORT CASE SEALER**

Save two-thirds of your valuable floor space with the A-B-C Short Case Sealer—with increased packaging efficiency, more speed, less expense... Automatically glues, folds and seals either or both top and bottom flaps of shipping cases in one operation. Made in eight models to fit any production requirement. Hot air heaters dry the glue in one-half the time. Speeds up to 30 cases per minute.

**TOP QUALITY  
CASE HANDLING  
EQUIPMENT**

Whatever your packaging job, A-B-C has a production proved machine for you—case sealers, unloaders and unscramblers, side sealers, and hand gluers.



**WRITE NOW FOR DETAILS  
AND FLOOR PLANS**

**A-B-C PACKAGING MACHINE CORP.**  
QUINCY, ILLINOIS

**OBSERVE THE RULE...  
GET YOUR SHIPMENTS THRU!**



Carriers know stencil marked addresses eliminate losses, prevent delay, assure fast delivery. Saves time and money in your shipping room. Electric and Hand Operated machines cut  $\frac{3}{8}$ ",  $\frac{3}{4}$ ", 1" letters. For sample stencil, Shippers' Handbook, prices, pin this to business letterhead with your name.

**MARSH STENCIL MACHINE COMPANY**  
67 MARSH BLDG., BELLEVILLE, ILL., U.S.A.



Circle No. 67 on Reader Service Card for more information



## 51 YEARS OF BETTER BOXES—"THE American WAY"



### American "Wirebounds" Cut Shipping Weight Save Manhours In Assembly And Packing!

Hard-earned profits need not be lost in packing and shipping. Here's an example: This motorized plumbing equipment is easily, quickly secured in this lightweight, low-cost protection-t and American Wirebound Crate—total shipping weight, 138 lbs. Contrast this with laboriously fitting and packing the unit into a heavy, costly, handmade crate, boosting the shipping weight 10 lbs. each. The difference, figured in hundreds of shipments and thousands of miles, amounts to **plenty**. If you are losing profits in packing and shipping, **American** can save them for you. Send your product for a **FREE SAMPLE PACKING**. No obligation.

#### Timber Tracts and Two Great Plants (Est. 1901)

Thousands of acres of company-owned timber supplying veneers to our plants conveniently located in Cleveland, Ohio, and Marion, South Carolina.



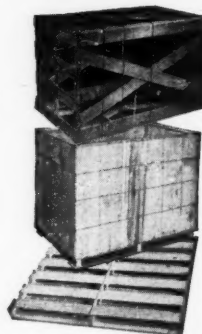
**THE American BOX CO.**

1909 W. 3rd Street  
Cleveland 13, Ohio

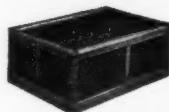
Phone: SU 1-5200

Marion,  
South Carolina

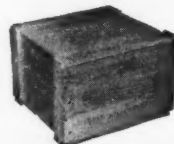
Circle No. 70 on Reader Service Card for more information



American Wirebound Crate,  
Tote Box, Pallet



American Fibreboard Box



American Nailed Wood Box

### Packaging & Shipping Useful Literature

(Continued from page 96)

#### Closing Cartons:

"Package For Profit"—A sound movie released by International Staple and Machine Co. Runs for approximately 11 min., explains the principle of the retractable anvil stapling machine. Describes how it drives and clinches staples to close corrugated or fibre boxes, tops and bottoms simultaneously, from the outside. Prints are available for loan on a no-charge bases.

Circle No. 248 on Reader Service Card

#### Using Strip Steel in Shipping:

Confab—External publication of Acme Steel Co. contains informative articles on strip steel products used in shipping. One article tells how a car-load shipper of waxed paper reduced damage by using bracing with steel strapping. Another outlines key steps to follow to keep flat wire stitching machines at peak efficiency for carton closure operations.

Circle No. 249 on Reader Service Card

#### Sealing Cartons:

"Scotch Pressure Sensitive Tapes for Carton Sealing and Reinforcing"—tells how seven types of tapes can be used for various tasks. It is offered by the Minnesota Mining and Mfg. Co. Contains photos of applications such as taping and reinforcing of heavy fiberboard containers, telescope cartons, and numerous other cartons and boxes for air, rail and truck shipment. Use of manual, semi-automatic, and fully automatic dispensing and sealing equipment is shown.

Circle No. 250 on Reader Service Card

**If Your  
Plant Doesn't  
Have One ...  
See page 46**



**NOW! FASTER ... STRONGER Carton Packaging**

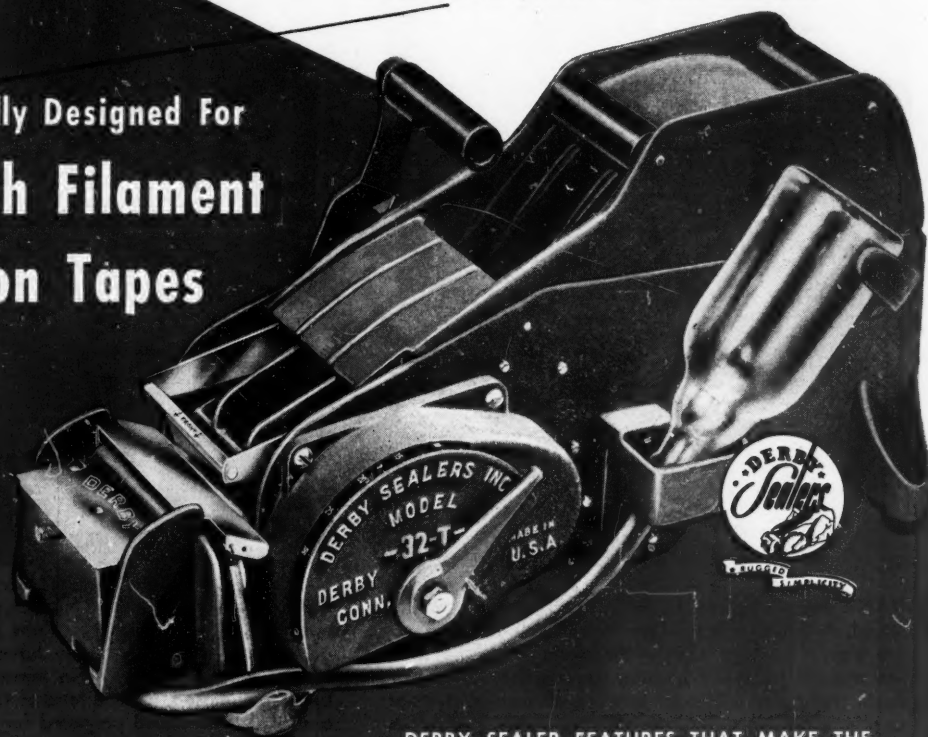
With the new

**DERBY** *Sealer*

**MODEL 32-T**

**Gummed TAPE DISPENSER**

Especially Designed For  
**Tough Filament  
Carton Tapes**



**TAPE STRAP\*  
GLASKRAFT\*  
FIBREEN\*  
SNAKE TAPE\*  
GLASPUN\*  
SEAL STRAP\***

● The Model 32-T takes tough carton tapes in its stride! Equipped with an *extra sharp, heavy duty, tool steel cut-off blade*, this fine machine dispenses such tough, rugged tapes as "Tape-Strap," "Glaskraft" and "Snake Tape" as efficiently as it does the lighter tapes, making less work for the operator and actually stepping-up production time on carton packaging! And here's another important, carton-packaging feature! Fibrous carton tapes are put on without pressure—need only proper moistening to hold. The Model 32-T, by means of an auxiliary reservoir, maintains a high water level in the tank, reducing Capillary Lag and assuring constant moisture at the top of the brush, even when tape is dispensed at great speeds. It's the ideal dispenser for carton packaging, and it sells at such a low, low price!

\*These are trade names used by various manufacturers to describe their filament imbedded tapes.

**DERBY SEALER FEATURES THAT MAKE THE MODEL 32-T THE FINEST MACHINE OF ITS KIND!**

- Heavy duty, extra sharp cut-off blade
- One-piece solid castings for extra rigidity
- Easy pull handle to reduce operator fatigue
- Delivers from 4 to 34 inches at one stroke
- Auxiliary Water Reservoir
- Accommodates any tape from 1" to 3" wide

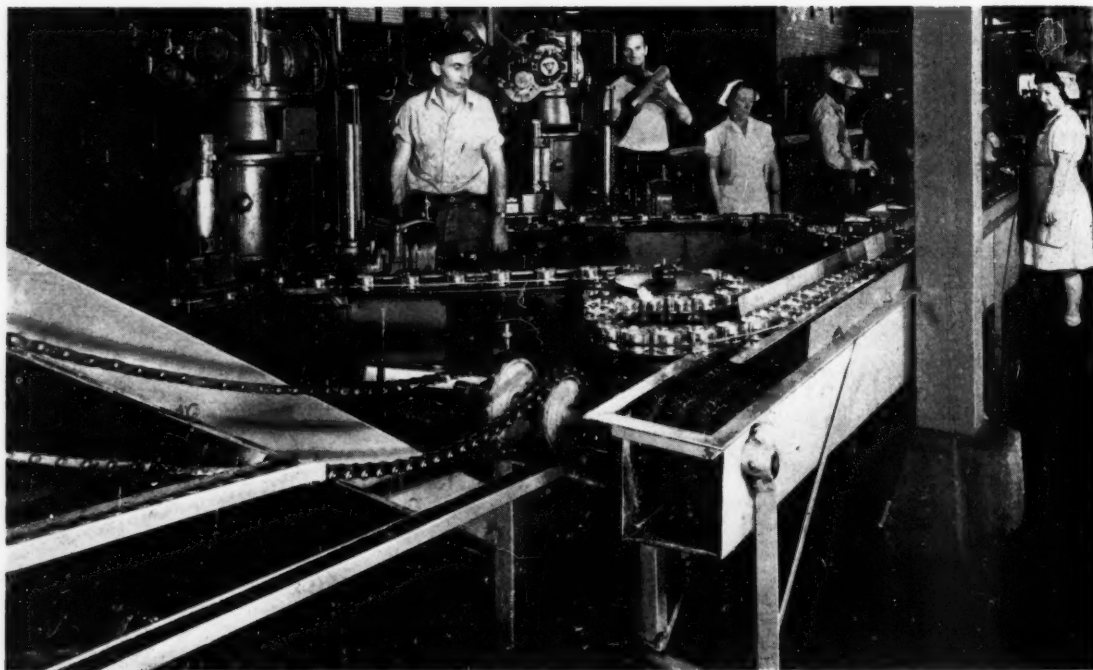
**DERBY SEALERS, INC.**

*Designers and Builders of Derby Sealers and  
Grip-A-Tab Pressure Sensitive Tape Dispensers*

**DERBY, CONNECTICUT**

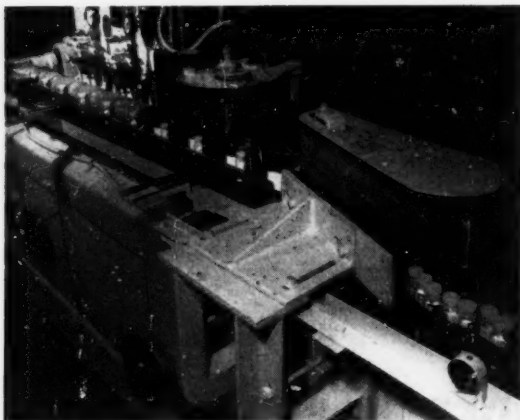
Circle No. 71 on Reader Service Card for more information

# How to Apply Chain Conveyors to

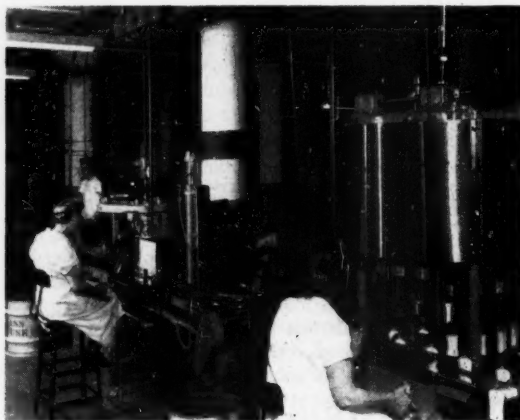


**CANNING** — At the South Coast Fisheries, Terminal Island. A group of chain belts handle full cans of tuna fish from a packing table to the closing machine, then into the washer. It is necessary to have four strands of chain (right), to effect oil leveling in such a manner as to concentrate spillage of oil at one particular point.

The oil leveling device is simply a slight rise placed in both outside chain strands. Cans are tilted to a predetermined angle after they have received oil. The correct amount of oil is thus removed from each can before it is closed. In all, a total of 150,000 cans per day are filled, closed and prepared for shipment each day.



**LABELING** — A table top chain leads to and has been made an integral part of this labeling machine at Bristol-Myers Co., Hillside, New Jersey. Correct spacing is insured by the rotating spacer at feed end.



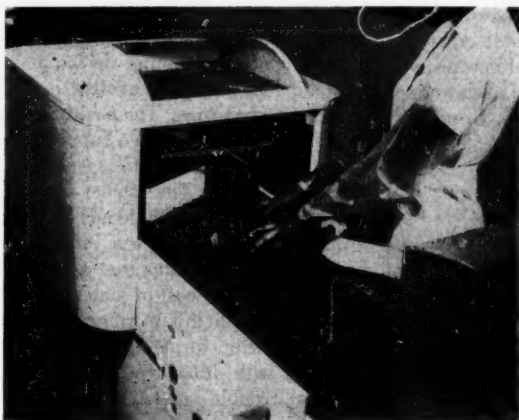
**BOTTLING** — At Toni Co., St. Paul, Minnesota, this table top chain conveyor has been made an integral part of the conveying system of a bottle filling machine. Results: speed, close control, and reduced breakage.

# to Packaging and Shipping Problems

**Here are five different ways in which table top chain conveyors have been used successfully in food, drug and cosmetic industries. It is easy to see how all of the applications shown here can be adapted to many other packaging and shipping operations.**

Handling, filling, closing and preparing for shipment of small packages like canned foods, small bottles and milk containers present problems often right down the alley of table top chain conveyors. Such chain, having a perfectly flat top surface is well adapted for supporting small flat bottomed containers of any type. Illustrated here are successful installations of this type of conveyor in several industries.

Ordinarily, table top chain conveyors are used for carrying containers along in single file with some type of guard rail placed on each side to help insure that all packages will remain in their proper positions as they move. The design of these rails should be such that they will cause as little friction as possible to packages on the conveyor.



**FEEDING** — Multiple chain conveyors on the same plane can be used advantageously at the feed end of filling machines to channel containers into a single line. This is at E. R. Squibb & Sons, Brooklyn, New York.

The flexibility of application of chain conveyors makes possible many variations in systems. A wide variety of widths is available to suit most needs, but in instances where it is necessary, the conveyors can be set up in multiples, on single planes to provide much wider flat surfaces. In fill-in cans, the conveyors can be set up to tilt containers a certain degree to one side to spill off excess liquid.



**CLOSING** — Milk in cartons must be handled with great speed and cleanliness. Here table top chain conveyor carries cartons through the entire sequence from container set-up to the filling and closing operations.

## BAG CLOSING MACHINES FOR EVERY NEED . . .



...from UNION SPECIAL'S  
Complete Line!...

FOR lower production costs . . . stronger, neater closures . . . ability to get out rush orders in a hurry, you can't beat Union Special Bag Closing Machines! Specially built to stand up under heavy production schedules, these machines provide the high output rates needed to meet modern competitive conditions.

In the Union Special line, it's easy to find the right unit to meet your particular requirements. ASK FOR RECOMMENDATIONS.

### Ask for Recommendations

UNION SPECIAL MACHINE CO.  
415 N. Franklin St., Chicago 10, Ill.

Gentlemen: Without obligating me, please furnish information on bag closing equipment to handle the following production:

Kind of bags used? \_\_\_\_\_

Filled weight of bag? \_\_\_\_\_

Material being packed? \_\_\_\_\_

Maximum bags per minute? \_\_\_\_\_

Check-weighing required? \_\_\_\_\_

Conveyor required on Machine? \_\_\_\_\_

Power: ☐ D.C., ☐ A.C., Volts \_\_\_\_\_

Phase \_\_\_\_\_ Cycles \_\_\_\_\_

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Circle No. 72 on Reader Service Card  
104

## Men in the News . . .

(Continued from page 16)

### ... at American Hoist & Derrick Co.

Harold O. Washburn, president of the American Hoist & Derrick Co. recently announced the election of John E. Carroll to the Board of Directors. Carroll is vice-president of sales for the company.

### ... at Flexible Steel Lacing Co.

John P. Ramsey succeeds Hugh L. Coats as sales manager of Flexible Steel Lacing Co. Coats will continue as secretary and director of the company.

### ... at Link-Belt Co.

James H. Oakes, former sales manager for enclosed drives has been appointed sales manager for the Philadelphia plant. Byron K. Hartman, who was formerly assistant sales manager is now sales manager for the new Colmar plant which will begin manufacturing operations later this year.

### ... at Standard Pressed Steel Co.

Bennett D. Jones, metallurgist at Standard Pressed Steel Co. since 1944 has been made manager of product development, a new post created to speed up development of new products. Named to succeed Jones as metallurgist was Robert L. Sproat, an assistant in the department since 1948.

### ... at Gar Wood Industries

James E. Edelbrock has been appointed manager of the Chicago Factory Branch, according to an announcement by R. F. Whitworth, branch division manager. He replaces Ross Miller, who has assumed the position of vice president and general manager of National Lift Co., a subsidiary of Gar Wood.

### ... at Lamson Corp.

At its annual stockholders meeting, the Lamson Corp. re-elected the following officers: Carl F. Dietz, president; Francis D. Weeks, vice-president and treasurer; Robert I. Hicks, vice-president; William L. Broad, secretary; J. A. Smith, assistant treasurer; and A. K. Donohoe, assistant secretary.

In addition to re-electing its board of directors for another year, the corporation added two new members: Nicholas Novak, and DeAlton Ridings.

### ... at Allis-Chalmers Mfg. Co.

A. E. Dorn has been named industrial sales manager, Tractor Division, according to an announcement by W. G. Scholl, vice president and general sales manager. Dorn succeeds R. M. Stone who has resigned to become associated with the Allis-Chalmers industrial dealership in St. Louis.

Dorn's previous post of Pacific Coast territory manager has been assumed by L. W. Davis, branch manager at Oakland, California.

## Packing Made Part Of Production . . .

(Continued from page 93)

a maximum rate of 240 cartons per hr. After sealing, the containers continue moving onto conveyors which carry them to proper storage areas or to the shipping department.

### How Stitching Machines Are Employed

At the end of a production line where base cabinet tops are assembled, a home-made positioning device and a stitching machine have greatly speeded closure of cartons. The positioning device is designed to give support to the long cartons and to speed the placing of staples: The stitcher is foot-operated to leave both hands of the operator free. It has been estimated by engineers at Mullins that approximately 1/3 of the cost of material has been saved with this arrangement as compared with former methods. In the past, with other types of closure material, trouble could arise from cartons opening during shipment. Now, the neater, stronger packages have eliminated that problem, and as a result, make it easier to meet requirements of railroads and carriers.





## Gaylord Boxes Assure Faster, Easier Packing and Shipping

You save money in your shipping room when you use Gaylord Boxes.

Protection-engineered, Gaylord containers fit your product like a glove . . .

That's why they save time in packing and speed up shipping. Your nearest Gaylord Sales and Service office will be glad to demonstrate the custom features that have won leadership for Gaylord Boxes.

*It's the unseen quality  
that gives you the extra  
margin of safety in*

### GAYLORD CONTAINER CORPORATION

General Offices: SAINT LOUIS

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT BAGS AND SACKS • KRAFT PAPER AND SPECIALTIES

New York • Chicago • San Francisco • Atlanta • New Orleans • Jersey City • Indianapolis • Los Angeles • Seattle • Houston • Oakland  
Minneapolis • Detroit • Columbus • Fort Worth • Tampa • Dallas • St. Louis • Cincinnati • Des Moines • Oklahoma City • Portland  
Greenville • San Antonio • Memphis • Kansas City • Bogalusa • Chattanooga • Milwaukee • Weslaco • New Haven • Amarillo  
Appleton • Hickory • Sumter • Greensboro • Jackson • Miami • Omaha • Mobile • Philadelphia • Little Rock • Charlotte • Cleveland



Circle No. 73 on Reader Service Card for more information

# Stop Profit Losses At Car Doorways

use  
**SIGNODE  
RETAINING  
STRIPS\***



Poorly protected car doorways invite damage to loadings and loss of profits. Why let it happen? Signode Retaining Strips can protect any load of bagged or packaged products!

Prove it? Of course we can! Carload shippers — 1,500 of them — are using Signode Retaining Strips to restrain loads of commodities such as flour, canned goods, sugar, chemicals, drugs, cereals, insulation, feed, seed, fertilizers, cement, salt and lime.

## Enjoy these advantages

Signode Retaining Strips reduce damage at car doorways . . . permit solid doorway loading . . . are more economical than any other barrier . . . can be easily and speedily erected . . . step up unloading . . . restrain any type of lading . . . boxes, cartons, bags, bundles, crates, etc. . . permit through-car loading . . . have railroads' approval . . . reduce damage claims . . . and help build good will with your customers.



\* Another exclusive service proved and tested for you by Signode

## Send for Facts

Whether you ship a few cars or hundreds of them, send today for specially prepared literature, describing these economical doorway barriers and their many uses.

# SIGNODE

**STEEL STRAPPING COMPANY**

2618 N. Western Ave.

Chicago 47, Ill.

*this seal means security in shipping*



Offices Coast to Coast  
In Canada: Canadian Steel Strapping Co., Ltd.  
Foreign Subsidiaries and Distributors World Wide

Circle No. 74 on Reader Service Card for more details

## Report from British Material Handling Exhibition . . .

(Continued from page 70)

facturers could learn some things from the English conveyor companies displaying here. While I am no technical man, it seemed to me that I saw things I had never seen at home. Several very ingenious methods of Station selection at which loads or packages could be dropped were on display. One system in particular has a series of station indicators, which can be adjusted so that several hundred combinations can be obtained. There were several vibrating conveyors shown and practically no skate wheel or roll conveyors were in evidence, as most of those shown were overhead.

There were an interesting number of manual handling items which I had never seen at home. There must have been six or seven devices for tail gate truck loading from the ground. No inbuilt tail gate loaders were shown, although I understand there is one made here. There were also several clever gadgets, such as a small combination hand truck and winch and a hydraulic jack lifter. One unusual item shown, was a four-wheel trailer, the platform of which let down to the ground. It is used for carrying other pieces of equipment, such as a small cement mixer, to a job and instead of having to build ramps to get the mixer onto the ground, the trailer platform sinks to the ground level—and/or rises from it—through the use of two hydraulic cylinders. We have nothing like it.

In summing up the whole show, it was interesting to note that several of the largest equipment manufacturers did not display. It was also interesting that several categories of products like steel strapping, were completely missing. There were no heavy ribbed steel containers such as we use, although there were several of the wire basket type.

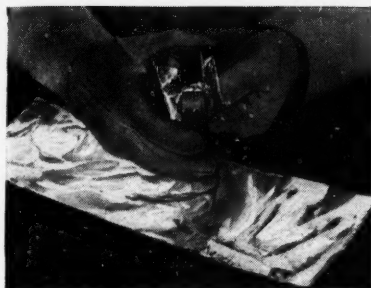
Typically, there was displayed a freight car tippler. In England where the freight cars are 20 ton cars and ride on two four-wheel trucks, it is possible to use a freight car tippler, but imagine the tippler we would require for our huge gondola cars with their 12 and 16 wheels and 50-ton capacities.

In all, I should say that the whole show was quite up to ours. British Industry does its job well—jolly well.

MIL-P-116A, Military Specification for Methods of Preservation dated March 25, 1952, method 1A-2 "Container, Overwrap, Dip-coat Sealed."

**READ AND SAVE  
THIS ISSUE FOR  
FUTURE REFERENCE**

# MILITARY PACKAGING SIMPLIFIED 4 of a series



1. Parts cleaned and proper preservative applied, ready for greaseproof aluminum foil wrap (JAN-B-148)\*. Note how aluminum foil can be "doughnut" wrapped, thus using less material.

*\*Obtain permission for Air Force use*



2. Wrapped rings inserted in manufacturer's carton ready for further packaging. This method is very acceptable, especially when correctly fitted cartons or containers are readily available. Secure label to carton.



3. Application of Grade C (JAN-B-121) overwrap. Be sure to use enough material to allow ample overlaps and avoid puncture of material by corners of carton.



4. Completed Grade C overwrap. Note the use of the "drugstore" or "locked seam" fold which adds to the waterproofness of this package.



5. Fold all seams and folds of Grade C overwrap down firmly by means of a tool. An adhesive known as Grade C sealer should also be used.



6. Completed package after dipcoating. Be sure to dip from either end and overlap by at least one inch. Affix label to dip-coat and overwrap with kraft or glassine paper to prevent blocking. If kraft is used, attach an additional label.

**Note:** MIL-P-116A was approved by the Departments of Army, Navy, and Air Force for use of the procurement services of the respective Departments.

## FOIL PACKAGING FOR CIVILIAN MARKETS

Foil is available again for non-military uses. This should be good news to many manufacturers. Because...industrial spare parts need protection too. And the "eye appeal" of brilliant aluminum foil is an asset to any product. Put foil to work for you as a wrap, a bag, a carton, a container or label. Let aluminum foil do double duty...giving your product "eye appeal" as well as protection...and watch sales grow.

## SEE REYNOLDS TRAVELING DEMONSTRATION OF MILITARY PACKAGING!



Government-specified methods of foil and laminated-foil packaging demonstrated with actual military products and parts. Write for *Coach Itinerary!* For expert help on any packaging problem, call the nearest Reynolds Sales Office and ask for the "Packaging Man." Or write direct to Reynolds Metals Company, General Sales Office, Louisville 1, Kentucky.



# REYNOLDS ALUMINUM

Circle No. 75 on Reader Service Card for more information

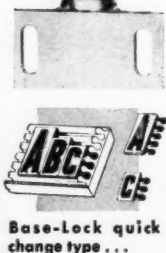




**S-P-E-E-D!**  
**CONVEYOR LINE**  
*Marking*

with **FORCE**  
.....

Automatically prints dates, codes, names, etc., on containers, products or other surfaces. Uses the Force Base-Lock Interchangeable Rubber Type of all sizes, permitting instant changes when necessary. Pays for itself in time and money saved. Self-inking. Gets power thru friction roller attachment. Adjustable for height. Write for full information today or mail "specs" for further data.



**WM. A. FORCE**  
A COMPANY, INCORPORATED  
216 NICHOLS AVENUE, BROOKLYN 8, N. Y.

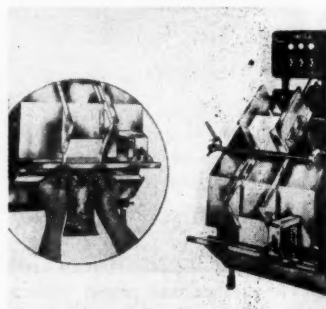
## Packaging & Shipping

### New Equipment . . .

(Continued from page 89)

#### High Speed Sealing Machine—Amsco Packaging Machinery, Inc.

Automatic sealing and labeling of bags is said to be the function of the Amsco Hi-Speed Automatic Jaw Sealing Machine with vacuum labeling attachment. According to Amsco, an operator places a filled bag into position and touches a hand trip starter plate with the back of his hand. The folding bar automatically guides the bag top and label between the jaws simultaneously with the automatic feeding of another label by vacuum labeling attachment. The machine will accommodate labels with face widths ranging from three in. to seven in. Sealing heat is controlled automatically by a dial type thermostat adjustable to the required uniform heat for the particular label and film being worked. Dimensions are: 34 in. high, 19 in. wide, and 27 in. deep. It operates on 110 v. AC.



Circle No. 243 on Reader Service Card for more information

# CUT CLOSING COSTS

with the Economical and Efficient...

● Requires no installation, supports or plant space... merely plug into any electrical outlet

● Entirely portable... weighs only 10½ pounds

● Handles all types of textile bags and most paper bags

● Unconditionally guaranteed!

● Economical to use... economical to buy!

## FISCHBEIN Portable BAG CLOSER

Lightweight, practical, handy, easy to operate! Efficiency and reliability proved by over 4000 users in every part of the world under varying operating conditions. For details on how YOU can cut YOUR Bag Closing costs with the FISCHBEIN Portable BAG CLOSER... write:

**DAVE FISCHBEIN CO.**  
Industrial Sewing Machinery

DEPT. 48 38 GLENWOOD AVE.  
MINNEAPOLIS 3, MINN.





## Literature Featured In Ads

(Continued from page 46)

Want expert help on any packaging problem? The Reynolds traveling demonstration of military packaging can be of value to you. Reynolds Aluminum Co. offers to send you a coach itinerary.

Circle No. 75 on Reader Service Card

How heavy, bulky, clumsy loads can be transferred from place to place with ease is the subject of literature you can get from Manzel Co.

Circle No. 23 on Reader Service Card

Aerol Co., Inc. wants to tell you about its new shock-absorbing wheel and caster. It is said that this unit provides maximum shock absorption under any condition. You can get free literature.

Circle No. 32 on Reader Service Card

The Buda FT Series of fork trucks are discussed in bulletin 1570 of the Buda Co. Both Diesel and gasoline powered trucks are discussed.

Circle No. 11 on Reader Service Card

All the power you want in an arms length is provided by the Moto-Truc, according to literature available from The Moto-Truc Co. The entire power unit is only 27 $\frac{3}{4}$ " long.

Circle No. 14 on Reader Service Card

Have use for a Mobile Crane? You can get free information about the Osgood Mobilcrane from Osgood Co. Some suggested applications are: loading and unloading barges and railroad cars; handling scrap iron, cement containers and heavy shipments.

Circle No. 36 on Reader Service Card

Bulk handling methods are discussed in a free illustrated catalog you can get from Sauerman Bros. Inc. It tells ways to reduce bulk storage labor and expense.

Circle No. 98 on Reader Service Card

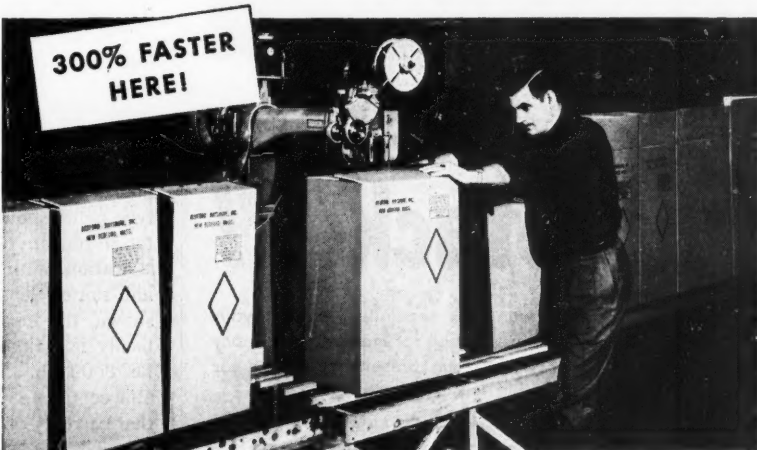
Job studies of Towmotor fork lift trucks in your industry are available from Towmotor Corp. They show you how the trucks can cut production costs.

Circle No. 44 on Reader Service Card



1. Bottoms sealed 80% faster than with tape, reports this novelty manufacturer. He now bottoms his cartons at the start of his conveyor system with a Bostitch bottom-stitcher, which makes its own staples from wire. Girls rapidly fill those cartons as they speed along the conveyor.

## One production line...2 big savings with Bostitch wire-stitchers at both ends of the line



2. One man does the work of three at the other end of the same conveyor... with a Bostitch top-stitcher replacing tape. This novelty maker also says that his staples cost him only  $\frac{1}{2}$  as much as tape per carton... his cartons are much stronger and neater... his workers happier.

**How much time and money can you save in your shipping room?** It's easy to find out. 300 BOSTITCH field men in 112 cities in the U. S. and 11 cities in Canada offer you nearby service. Illustrated bulletin shows you how 30 of the 800 Bostitch models... wire-stitchers, stapling machines, hammers, pliers, tackers, staplers... do your fastening jobs better and faster. Mail the coupon below today.

**BOSTITCH, 394 Mechanic Street, Westerly, R. I.**

Please rush me Bulletin 267 which shows how 30 Bostitch stapling machines save time and money in many vital shipping room jobs.

I'm particularly interested in Bostitch machines for: assembling cartons ☐ top-sealing ☐ bottoming ☐ sealing corrugated wrappers ☐ repairing cartons for re-use ☐ bag-sealing ☐ covering barrels ☐ tagging ☐ Other \_\_\_\_\_

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

**BOSTITCH®** fastens it better <sup>AND FASTER</sup> with wire

Circle No. 78 on Reader Service Card for more information



## Well Stacked!

Let our rack specialists lay out your new installation for maximum efficiency or study your present operation for possible improvements.

### PROPER STACKING OF GOODS SAVES SPACE AND LABOR

E.M.I. engineers, fabricates and installs complete rack systems. Our designs offer the greatest in strength and safety, incorporating our square welded steel tubing and simplified assembly methods.

- PALLET RACKS
- PORTABLE STOCK RACKS
- COIL RACKS
- SPECIAL RACKS FOR ALL APPLICATIONS

Write for our catalog

# EQUIPMENT MFG. INC.

41552 HOOVER ROAD, DETROIT 5, MICHIGAN

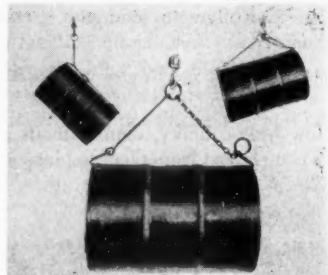
Circle No. 79 on Reader Service Card for more information

## What's New In Equipment . . .

(Continued from page 31)

### Drum and Barrel Sling—Palmer-Shile Co.

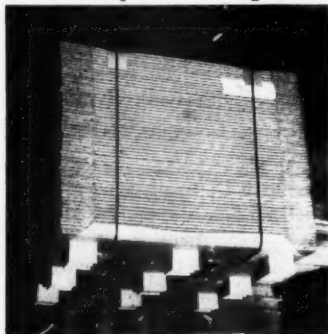
This sling is designed for use in loading and unloading trucks, and for general purpose handling. According to the manufacturer, Palmer-Shile Co., the sling will also handle drums for draining purposes. It can pick up a drum or barrel from lying position and set it on end. It handles drums, barrels, kegs, or anything with a lip. Capacity is 1000 lb. Construction is of welded chain and forged grab hooks. Weight is approximately 8½ lb.



Circle No. 149 on Reader Service Card for more information

### Adjustable Paper Pallet—Gaylord Container Co.

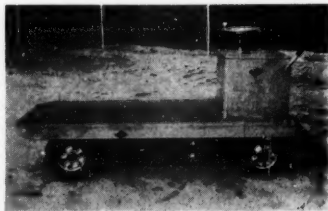
This disposable, adjustable paper pallet, made by Gaylord Container Corp. is said to provide strength, and economy. It is reported that four different sizes of containers can be handled with the simple type pallet shown in the accompanying illustration. With nine half-slotted legs, as shown, the load capacity is claimed to be 8000 lb. With nine corrugated legs, that capacity is reportedly increased to 14,000 lb.



Circle No. 150 on Reader Service Card for more information

### Versatile Powered Platform Truck—Consolidated Industries, Inc.

This one-ton platform truck, made by Consolidated Industries, Inc. is said to be adaptable to a great variety of uses. It has 21 sq. ft. of loading surface. Removable 24 in. stanchions can be stowed in a rack under the platform to increase space. Room on each side of the engine is designed for carrying long objects. Recommended uses include warehouses, factories, supply depots, docks, railway and truck terminals, and airports. An adapter for towing hand trucks greatly increases usefulness, it is claimed. The unit is chain-driven by a 3.10 hp Briggs & Stratton engine.



Circle No. 151 on Reader Service Card for more information

### Hydraulic Scoop Attachment—Elwell-Parker Electric Co.

The Elwell-Parker Electric Co. has designed a hydraulically powered scoop for handling a variety of dry bulk materials such as sand, salt, coal, sulphur, etc. Dimensions and capacities vary with type of material to be handled and the size truck to which the scoop is attached.



Model shown is for use on a 4000 lb. capacity Elwell-Parker fork truck and has a maximum capacity of 25 cu ft. or 3200 lb. Models for 2000 and 6000 lb. capacity trucks are also available. A double acting hydraulic cylinder controlled by a valve on the trucks cowl provides positive control of the scoop body to facilitate loading and dumping.

Circle No. 152 on Reader Service Card for more information

### Push Button Hoist—Chisholm-Moore Hoist Corp.

A push-button control model has been added to the line of electric hoists manufactured by Chisholm-Moore Hoist Corp.



It is said to operate from any single phase lighting circuit, 220 or 440 volt power line. Regardless of the voltage used, no more than 110 volts pass through the control station. The hoist is available in capacities from 250 lb. to 2000 lb.

Circle No. 153 on Reader Service Card for more information

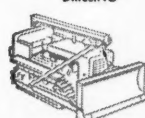
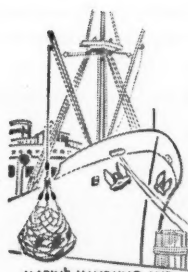
### Plastic Tote Box—Bassons Industries Corp.

Where ten different-sized containers were formerly needed to handle gun stocks at Winchester Repeating Arms Co., a single plastic tote-box now suffices. Custom made by Bassons Industries Corp., the box is 24 in. long by 19 in. wide by seven in. deep. Extremely low cost is credited to a low-cost mold. The plastic box holds stocks

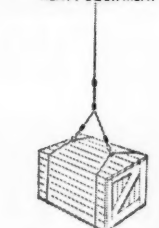


snugly in rocker grooves molded to stock contours. When riding on a conveyor belt, the box is said to sit flush without any overhang. It is claimed that life expectancy is eight to twelve years. Boxes may be nested or stacked at right angles to one another. Plastic used is Roy-

FLOW • AUGUST, 1952



CONSTRUCTION AND HEAVY EQUIPMENT



MATERIALS HANDLING

SIZES: 1/8" to 3/4"

# Positive non-slip grip



## with the SAFE-LINE CLAMP on the job

The patented Safe-Line Wire Rope Clamp is by far the most modern, efficient and safest method for holding wire rope.

*Modern* because it is of revolutionary new design which speeds clamping and hugs the rope so no fouling is possible.

*Efficient* because it has the holding power of 3 or 4 ordinary clamps and can be reused repeatedly.

And *safest* because the double splines grip each wire strand *without cutting action* and with a vise-like pressure that cannot slip. No dangerous wire ends protrude beyond the clamp.

This amazing new clamp has been approved by the Underwriters Laboratories and proved on literally *millions* of holding jobs.

Go *modern* and *safe* wherever you use wire rope. Standardize on the National Safe-Line Clamp!

**THE NATIONAL SAFE-LINE CLAMP IS STOCKED BY LEADING INDUSTRIAL SUPPLY DISTRIBUTORS**

## THE National SAFE-LINE CLAMP CORP.

11252 EAST NINE MILE ROAD • VAN DYKE MICHIGAN

Subsidiary of The Lamson & Sessions Co. • Cleveland 2, Ohio

Circle No. 80 on Reader Service Card for more information



alite, U. S. Rubber's styrene copolymer, said to have rugged wear quality, low water absorption, and resistance to lubricating oils and other chemicals likely to come in contact with the boxes.

Circle No. 154 on Reader Service Card for more information

#### Life Prolonging Battery Cap—Industrial Research Inc.

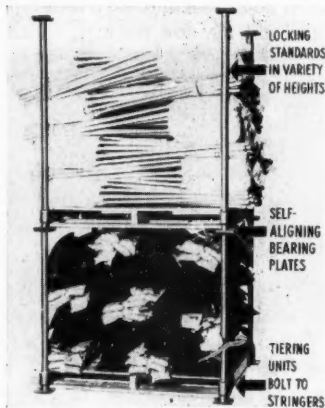
A battery cap has been introduced by Industrial Research Inc. with a claim that it preserves water in batteries, prevents corrosion and warns of overcharge. Called Hydro-cap, it contains a catalyst which converts a battery's escaping hydrogen and oxygen gases back into water, maintaining level for a longer period of time than otherwise possible. Corrosion is prevented by the capture of sulphuric acid fumes and by washing them back into the battery. This is said to keep acidity at the proper efficiency level and to protect cables, holders, wiring, electrical terminals, etc., from corrosion. The cap also is said to indicate overcharge when it turns hot to the touch, (around 200° F.).



Circle No. 155 on Reader Service Card for more information

#### Tiering Pallet Kit—Elizabeth Iron Works, Inc.

The Dubl-Duty Pallet Stacker Conversion Kit, introduced by Elizabeth Iron Works, Inc., is said to change any standard wooden pallet into a tiering pallet. Each kit contains four tiering attachments and standards, nuts and bolts. Tiering attachments fit on the ends of the pallet stringers and are secured in place with bolts. Standards come in a variety of interchangeable deck storage heights from 24 in. to 48 in. It is reported that attachments are flush with outside of deck area leaving full pallet deck surface for storage. Self-aligning bearing plates on standards and tiering attachments are designed to prevent shifting and to assure safe tiering. Kits are of all-steel welded construction and are said to have a capacity of 3000 lb.



Circle No. 156 on Reader Service Card for more information

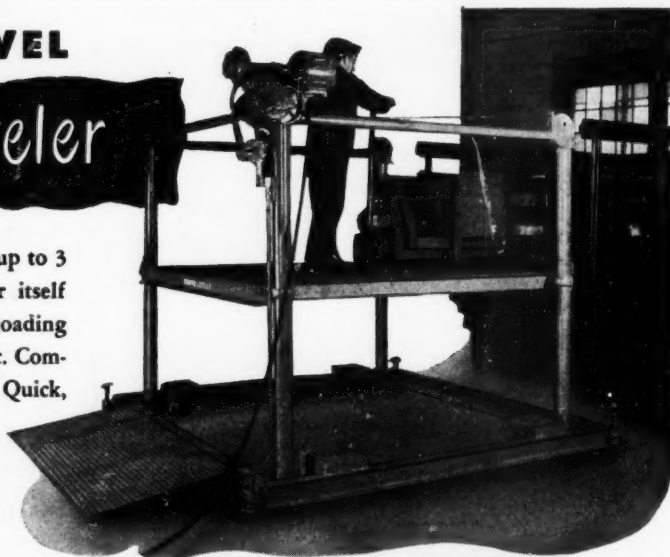
## Put LOADS on the LEVEL

with the **SERVICE Leveler**

• With the Service LEVELER, loads up to 3 ton can be handled... The LEVELER pays for itself through important savings in time and labor in loading trucks and cars, lifting to different floor levels, etc. Complete safety is provided by tested safety devices. Quick, easy installation requires no expensive sub-surface alterations. Portable and stationary models available. Write today for detailed specifications.

#### See SERVICE for "SPECIALS"

Service Levelers, Liftables and Electraulic Lifters range widely in capacity, size and performance characteristics. Versatile design permits most Service Lifting Equipment to be made up as low cost semi-specials to suit your needs.



Keep **MOTOWLIFT** in Mind!

It's the fork lift truck so good that military needs take all we can make. Soon, we hope, you will be able to buy it again—the best truck for most jobs in most plants. Keep MoTowLift in mind!



## SERVICE CASTER & TRUCK CORP.

Executive Offices: ALBION, MICHIGAN • Plants at Albion, Michigan and Somerville 43, Mass.

SEE YOUR CLASSIFIED TELEPHONE DIRECTORY FOR NEAREST DISTRIBUTOR

Circle No. 81 on Reader Service Card for more information



### Combination Box and Bag Truck—Dico Co.

A hand truck said to have the advantages of two trucks has been added recently to the line of Dico all steel trucks. The new truck features a heavy, hinged bag nose-plate



that is snap-locked securely against the frame when the standard fork is used for boxes and crates. The truck is converted to a bag truck by pressing the foot release pedal which flips the nose plate down over the toe fork. It is available in three different sized models. Additional features include: completely closed steel box side shafts; unbreakable

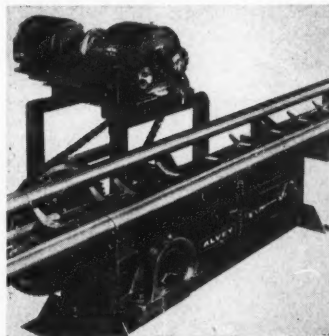
formed steel wheel brackets; straight or curved wooden handles.

Circle No. 157 on Reader Service Card for more information

### Tractor Drive—Alvey Conveyor Manufacturing Co.

Development of a tractor drive for carousel type conveyors has been announced by the Alvey Conveyor Manu-

facturing Co. Reduced height of the drive (as low as 21½ in.), elimination of offset chains, and deflection from one chain to another are primary benefits claimed by the maker. The drive consists of a head and take-up sprocket, driving a short pitch roller chain that allows the drive to be arranged as low as 21½ in. from the floor to the top of the roller chain. The roller chain carries twin driving lugs mounted on pivots and controlled by cams to insure smooth engagement of the conveyor chain hubs. The conveyor chain is engaged at take-up end, and released shortly before the tractor chain reaches the head sprocket. This is said to eliminate the need for an offset chain, and to make deflection from one chain to another unnecessary.



Circle No. 158 on Reader Service Card for more information

### 450-570 MC Two-Way Radio—Motorola

Many industries wanting two-way radio communications, but unable to qualify under existing FCC regulations, may find help in a new line of radio communica-

## SHIFT YOUR LOAD ... TO DICO



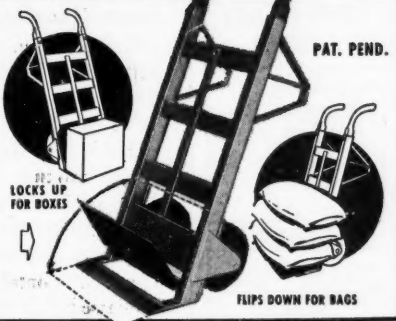
"Float-Away"  
SERIES 20  
Barrel and Drum Truck



SERIES 70  
Heavy Duty  
Warehouse  
& Railroad  
Freight Truck

### SERIES 70-B & 80-B Combination Box and Bag Truck

Here's our latest addition to DICO's tested and proved line of Steel Hand Trucks...the new and exclusive Models 70-B and 80-B. It's a rugged, convenient hand truck with the advantage of 2 trucks. Snap lock holds bag plate up tightly for boxes, and foot release flips plate down for bags. 3 models with straight or curved wooden handles.



PAT. PEND.



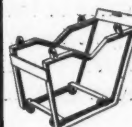
SERIES 60  
Bag & Keg  
Truck

**DICO**  
DRAIN  
STANDS

### 90 SERIES



MODEL 90-W



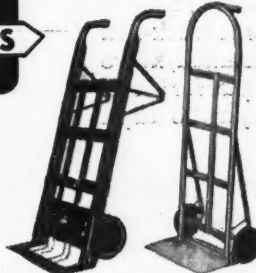
MODEL 91



MODEL 92-W  
"E-Z-Rack"

## DICO STEEL HAND TRUCKS

### MODEL 93 Combination Truck and Drain Stand



SERIES 80  
Extra Heavy Duty  
Warehouse and Railroad  
Freight Truck



SERIES 30  
Utility Truck  
(Model 31 equipped with  
Larger Wheels)

### Write for FREE CATALOG...

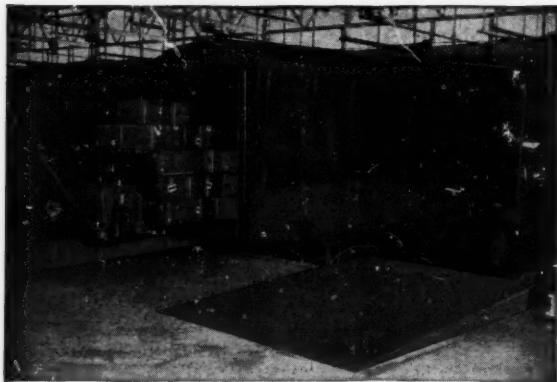
Or see your jobber. Let us give you full information and prices on the "DICO" Steel Hand Trucks best suited to fit your particular trucking problem.

**DICO**  
COMPANY

204 S. W. 16th Street — DES MOINES, IOWA

Circle No. 82 on Reader Service Card for more information

## Load by Lift-Truck Directly Into Commercial Carriers

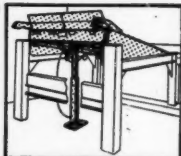


**ROWE  
ADJUST-A-DOCKS**  
CUT DOCK HANDLING TIME  
**67%**

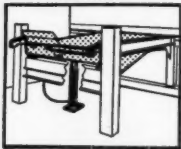
Costly time and labor become profit when you install Rowe Adjust-A-Docks. Shipments are moved directly into carriers by fork or lift trucks, eliminating costly hand loading. One Adjust-A-Dock triples ordinary dock capacity. Damage is cut. Hazardous loose dock plates are eliminated. Loss time accidents reduced. Rowe Adjust-A-Docks hydraulically raise or lower to truck-bed height. Easily installed, Rowe Adjust-A-Docks pay for themselves as quickly as 30 days.

**WRITE TODAY**  
for free illustrated Bulletin  
showing typical installations

**ADJUST-A-DOCKS  
RAISE OR LOWER  
TO MEET THE  
LEVEL OF ANY  
CARRIER**



RAISED



LOWERED



**ROWE METHODS, INC.**  
2534-C Detroit Ave., Cleveland 13, Ohio

Circle No. 83 on Reader Service Card for more information  
114

tions equipment operating in the 450-470 mc. band. New receiver design according to Motorola, includes sealed, silver plated cavities for optimum R. F. signal pre-selection characteristics, triple conversion in conjunction with Permakay filter, automatic frequency control, and a standby drain-saver circuit. Transmitter employs nine tubes, all of which may be obtained from domestic manufacturers. Mobile units for six to 12 volt DC operation are available.

Circle No. 159 on Reader Service Card for more information

### Wheel Conveyor Storage Racks—Harry J. Ferguson Co.

This application of double line wheel conveyors and racks was engineered and built by Harry J. Ferguson Co. It is said that the arrangement simplifies the storing of loaded pallets, permitting them to be rolled along the staggered wheels to their desired positions. It is said to be especially useful in tight storage areas.



Circle No. 160 on Reader Service Card for more information

### Drum Handling Device—Kist Machine Co., Inc.

Kist Machine Co., Inc. claims that this drum handling unit will safely lift full drums with cover removed and transport them from place to place. To load, you simply move the device, named "Drumobile", around the drum or barrel and place the handle in the down position. The full container is raised off the floor and is ready for transporting to another location. It is said that the unit will handle up to 850 lb. in the standard model. Heavier capacity models are available. Steel or rubber tired wheels are available. Special non-sparking Drumobiles are manufactured for handling volatile liquids.



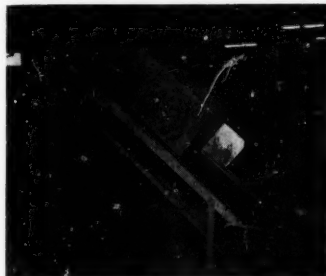
Circle No. 161 on Reader Service Card for more information

### Rough Top Conveyor Belting—H. K. Porter Co., Inc.

When it is necessary to handle materials on inclines as steep as 42°, H. K. Porter Co., Inc. claims to have a solution. Its Safety-Grip Rough Top Conveyor Belting is

AUGUST, 1952 • FLOW

constructed with thousands of fingerlike rubber tentacles that grip and hold extremely slippery materials, it is said.



The conveyor belt was designed to carry wax-surfaced cartons, ice, tin plate, glass, tile, etc. Pulleys of two-in. per ply are recommended, although Porter reports that smaller diameters have been used with satisfactory results.

Belt construction is usually three ply of duck and a minimum of 3/32 in. top cover thickness by friction bottom surface.

Circle No. 162 on Reader Service Card for more information

#### Rigid Pipe Rack Pallet—National Pallet Corp.

A rigid pipe rack pallet that is claimed to be easy to stack, and which reportedly won't sway has been designed by National Pallet Corp. According to the manufacturer, complete rigidity without the use of cross braces results in more usable space and greater accessibility. In addition, the pallet can be used as a regular handling or shipping pallet when not in rack service, it is said. Top and base are purchased separately.

Circle No. 163 on Reader Service Card for more information

#### Double Framed Lift Truck—West Bend Equipment Corp.

A double-framed lift truck with special spring suspensions for use in moving fragile loads has been developed by West Bend Equipment Corp. The hydraulic truck has a spring-suspended frame superimposed on the lifting frame. Both frames are raised by action of the horizontal



hydraulic lifting unit. Designed especially for cushioning the load in such uses as handling green sand cores in foundry operations, cement blocks, patterns, ceramics and glass, radar, TV etc., the truck is available in capacities from 2000 to 6000 lb. It

is made in seven in., nine in. and 11 in. lowered heights and is available with rubber tired wheels. rolls weighing up to a maximum of 5000 lb.

Circle No. 164 on Reader Service Card for more information

#### Magnetic Pulley—Magnetic Engineering & Mfg. Co.

Radial Design is claimed as the secret of success of a permanent magnetic pulley introduced by Magnetic Engineering & Mfg. Co. A more positive separation of ferrous



## VERSAVEYOR

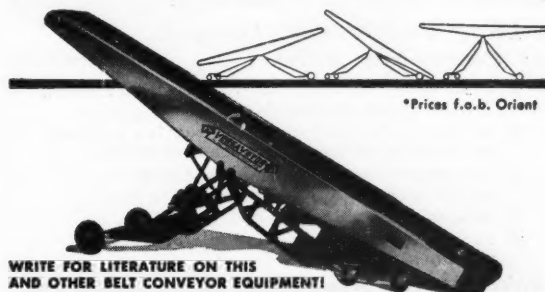
**LOW-PRICED\*.** A 13-ft. unit without either undercarriage \$343; add \$80 for wheel undercarriage, \$93 for caster undercarriage. (See photo below.)

**LIGHT-WEIGHT.** Whether it's a 13, 15, 17 or 19-ft. length, the Versaveyor is easy to handle 'most anywhere. For example, the 13-ft. unit without undercarriages weighs only 150 lbs.

**EASY-TO-HANDLE.** From a horizontal low of 22 in. to a height at either end of 9 to 14 ft. (45-degree angle), the Versaveyor is safe and stable. Unit load, 150 lbs.; distributed load, 300 lbs.

**WELL-BUILT.** Box-type frame; heat-treated aluminum alloy.

**MANY USES.** Out of box cars to gravity conveyors. Into trucks. Up to second floors. Flat on stairways. Will pass through 30-in.-wide door with undercarriages attached. Has 12-in.-wide belt.



WRITE FOR LITERATURE ON THIS AND OTHER BELT CONVEYOR EQUIPMENT

**BELT THE BELT CORPORATION**  
7406 STAHL ROAD ORIENT, OHIO

Circle No. 84 on Reader Service Card for more information



## How Much Will Accidents Like This Cost You This Year?

Box car door opening by laborious hand operations can be... and is... dangerous and deadly!

Protect your employees with the Nolan Model H One-Man Car Door Opener... guaranteed to open the most stubborn, balky box car door in 20 seconds or less!



## Fall Fatal To Worker

### Man Killed in Odd Accident

... Lapeer County Co-Op employee, died Monday afternoon at the Lapeer hospital, an hour after he fell from a box car.

... and ... were trying to open a door on the car. They got it partly open and ... climbed into the car. Pushing to open it further, he slipped and fell, his head striking a small stone.

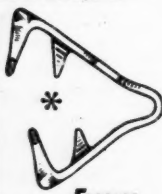
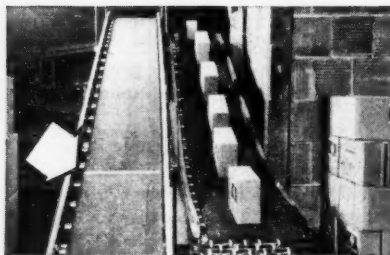
He died ... Above news item appeared in The Lapeer County Press, Lapeer, Mich., February 1, 1952

Over 10,000 Nolan 1-man Car Door Openers now are saving time... saving money... saving lives, for all types of businesses. A few quick pulls on the NOLAN anchor chain does the job by one man. No gangs needed. No mangled limbs or loss of life from jammed or falling doors. The NOLAN saves its low initial cost in its first hour of operation. FREE CATALOG gives complete description. Order one or more NOLAN Model H Car Door Openers to meet all your needs.

**THE NOLAN COMPANY**  
118-A Pennsylvania St. • Bowerston, Ohio

# ALLIGATOR

## CONVEYOR BELT LACING



Every  
Tooth  
A Vise\*

### in Long Continuous Lengths for Conveyor Belts . . . . .

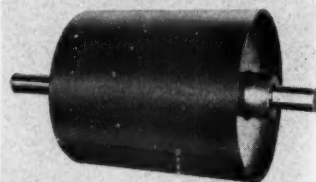
- ★ Excellent for Package Conveyors, Portable Loaders, Trenching and Ditching Machines, etc.
- ★ In canneries where corrosion or rust is a problem specify Alligator made of Stainless or Monel.
- ★ For magnetic separators or anti-sparking specify Alligator made of Everdur.
- ★ Separable and smooth on both sides.
- ★ 12 sizes. For belts from 1/16" to 5/8" thick—and any width.

Order from Your Supply House. Ask for Bulletin A-60.  
**FLEXIBLE STEEL LACING CO.** 4702 Lexington St., Chicago 44, Ill.

**JUST A HAMMER TO APPLY IT**

Circle No. 86 on Reader Service Card for more information  
116

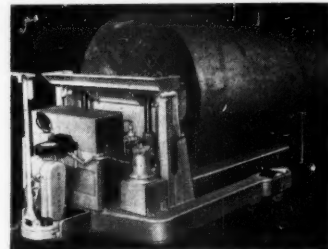
materials on conveyor production lines is said to result from this design. According to the manufacturer, magnetic placement which is perpendicular rather than parallel to the pulley circumference causes ferrous material passing over the pulley to be snapped and held firmly across the magnetic gap. Flux leakage is said to be eliminated to assure complete tramp iron removal. For each different size pulley, the radial design is specially engineered for maximum efficiency.



Circle No. 165 on Reader Service Card for more information

## 8000 lb. Lift Truck—Moto-Truc Co.

This walkie type lift truck has been introduced by the Moto-Truc Co. It has 8000 lb. capacity and is powered by an 18-volt battery power unit. Maximum hydraulic lift is 14 in., load length is eight ft. Dual 10-in. and seven-in. load wheels are said to prevent wedging of front wheels in floor slats. Travel speed is 2½ mph loaded and 3 mph unloaded. Dead-man controls are standard with automotive type brake applied to the drive wheel. It is claimed that the walkie design of the truck results in a smaller turning radius.



Circle No. 166 on Reader Service Card for more information

## Conveyor System—Metzgar Co.

Shown here is a basement installation of combined gravity and power conveyor units which feature usable space over the outlet for display or storage purposes. Goods are received by chute and gravity line at any point in the basement, then by gravity and Power Helper power conveyor to the floor above. Specs on the installation are: gravity conveyor, 15 in. O.A.—four rollers per ft.; power conveyor 16 in. O.A. belt; boom length 14 ft. six in. on 25° incline with two ft. power tail section; powered by ¾ h.p., 440 volt electric motor mounted under the outlet; flush mounted with on-off-reverse button. Manufacturer is the Metzgar Co.

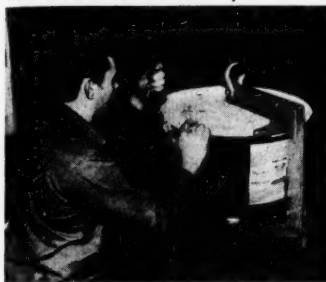


Circle No. 167 on Reader Service Card for more information



### Adjustable Drum Lifter—Pucel Enterprises Inc.

Pucel Enterprises Inc. claims that you will like the Grizzly Drum Lifter because: It lifts light and heavy loads with practically no manual labor by the operator; lifts old and new drums—open and closed; stacks and tiers drums vertically in close and awkward places; weighs only 23 lb. and has welded construction. The unit is said to be adjustable to fit practically all 55 gallon drums, and can be used with fork trucks, chain falls,



cranes and hoists. Capacity is 2000 lb.

Circle No. 168 on Reader Service Card for more information

### Mobile Crane Trailer—Silent Hoist & Crane Co.

The Krane Kar mobile swing-boom crane, of Silent Hoist & Crane Co., can now be supplied with a recently developed trailer. This, according to the manufacturer, makes the crane dual-purpose equipment, providing a mobile crane for lifting, stacking, spotting and loading applications, and a transporter for carrying and delivering bulky, heavy loads, or large quantities of varied materials in yards or shops.

Circle No. 169 on Reader Service Card for more information

### Reversible Freight Shelves—Market Forge Co.

Reversible shelves now being supplied for Load-Mobile freight trucks by Market Forge Co., are designed to double carrying area. Shelves are of all-steel construction. In-



corporating both a flat and a railed side, they may be used with the flanged side down to handle overhanging items or the flanged side up to carry smaller parts and parcels. It is reported that more than one shelf can be used at one time to

further increase platform space. Capacity of the freight truck is 2½ tons.

Circle No. 170 on Reader Service Card for more information

### Paper Roll Attachment—Mercury Mfg. Co.

A hydraulically actuated roll handling clamp assembly has been designed by Mercury Mfg. Co. The entire assembly is said to be constructed in unit fashion so that it can

## Quick and Convenient Materials Handling

PORTABLE  
FLEXIBLE  
ECONOMICAL



**fmc** ACCORDION  
GRAVITY  
CONVEYOR

Makes  
Box  
Handling  
Easy



**EXTENDS** to lengths required, up to a maximum of 9½ feet.



**BENDS** to avoid obstructions or to conform to loading requirements.



**CONTRACTS** to 3½ feet. Can be turned over and rolled to storage by one man.



**RAISES or LOWERS** from a minimum height of 20½ inches to a maximum height of 28 inches. Legs in special lengths available.



**CURVES** around corners or posts. Split rollers keep boxes on conveyor without side rails.



**RUGGED** construction. Steel Roller staggered wheel or side wheel available. Aluminum type models subject to availability of materials.

**fmc** CLAMP  
TRUCKS



For Quick and  
Easy Handling of

Boxes, Crates, Baskets and Lugs

Clamp arms with replaceable jaw tips grip containers firmly. Foot pedal controls opening and closing of clamp arms. Rugged construction, equipped with rubber-tired ball-bearing wheels. Models available for various types of box handling.



FOOD MACHINERY AND CHEMICAL CORPORATION  
PACKING EQUIPMENT DIVISION  
RIVERSIDE, CALIFORNIA

MM-36

Circle No. 87 on Reader Service Card for more information

Circle No. 88 on Reader Service Card for more information

## HOBBS Engine Hour METERS

record  
HOURS and  
MINUTES of  
lift truck  
operation



NOT A REVOLUTION COUNTER but a true timing instrument that tells WHEN to lubricate, overhaul, etc. Helps prevent breakdowns and prolong equipment life.

### APPROVED BY LEADING MANUFACTURERS

Installed as original equipment and/or recommended as an approved accessory by leading materials handling equipment manufacturers. Full information is available from your factory branch, representative or distributor.

**ABOUT DELIVERY** — Defense requirements are such that we must have a lead time of several weeks to fill orders. Order from your factory source now for delivery.

ORIGINATED AND MANUFACTURED EXCLUSIVELY BY

**John W. Hobbs Corporation**  
2061 YALE BLVD. SPRINGFIELD, ILLINOIS

**KEEP  
AHEAD  
OF  
DEMAND**  
...with MARIETTA

● Don't let shortages of vital raw bulk materials slow down production or completely idle your plant. Meet such emergencies with a Marietta storage system and increase your storage capacity from days to weeks.

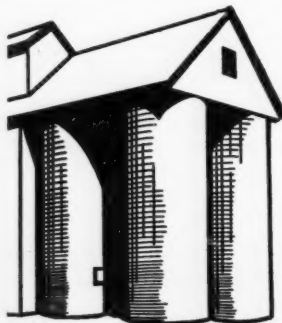
Marietta tanks are constructed of high strength Air-Cell or solid concrete staves, in any size, any arrangement . . . give you large capacity storage facilities . . . enable you to buy in bigger quantities at lower cost.

Whatever flowable raw bulk material you store and handle . . . coal, coke, sand, gravel, chips, chemicals . . . whether you need storage tanks for a few tons or several hundred tons . . .

Marietta engineers can design a safe, modern, permanent, flexibly planned storage system to meet your present and future needs. Write, wire for full details.

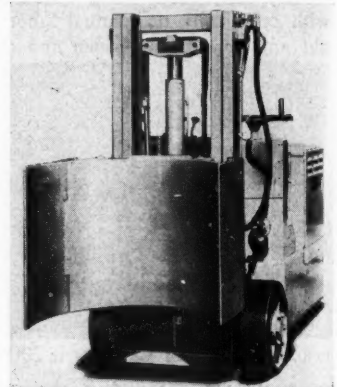
### THE MARIETTA CONCRETE CORP.

- Marietta, Ohio
- Baltimore, Md.
- Charlotte, N. C.



Circle No. 89 on Reader Service Card for more information  
118

be installed in place of standard forks. Two bolts retain the assembly on the lifting carriage, and installation or removal and replacement is said to be effected in 20 minutes or less. The clamp involves a flipper arrangement. It is claimed that horizontally disposed rolls can be easily picked up without necessity of blocking and without employing any special forward tilt arrangement. The flipper arrangement is also said to make it possible to break out rolls from tightly packed shipments by sliding them sideways. Clamp shown is for 3700 lb. rolls of 30 to 36 in. dia. Models are available for other roll diameters and for rolls weighing up to a maximum of 5000 lb.



Circle No. 171 on Reader Service Card for more information

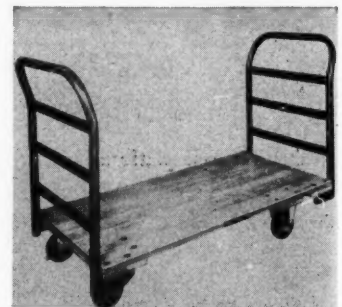
### Carton Attachment—Towmotor Corp.

Here's an attachment for lifting cartons with interlocking cover flanges. Spade-like arms move up under the flange of a box to lift a load. Two cartons can be handled at one time by stacking one on top of the other, and placing the lift in contact with the bottom carton, and raising the carriage. It is stated that the attachment is quickly interchangeable with standard forks. The arms can be adjusted laterally to handle cartons of varying widths. Manufacturer is Towmotor Corp.

Circle No. 172 on Reader Service Card for more information

### Light Weight Platform Truck—The Fairbanks Co.

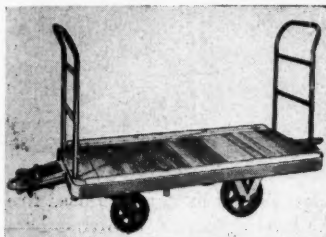
The "Bantamweight" is a light weight platform truck recently introduced by The Fairbanks Co. Models are built to handle loads from 750 lb. to 1500 lb. depending on the size and type wheel with which they are fitted. Platform of the truck is made of tongued-and-grooved seasoned oak reinforced with cross battens and are standard in four sizes, 24" x 42", 27" x 48", 27" x 54" and 30" x 60". The trucks are available with either one or two offset pipe racks and may be obtained with either vulcanized rubber tired, solid rubber or semi-steel wheels.



Circle No. 173 on Reader Service Card for more information

## Industrial Trailer—Lansing Co.

An industrial trailer featuring redesigned couplers and high speed casters has been announced by the Lansing Co. According to the manufacturer, the trailer, Model 895, is built on a welded frame, has redesigned "long-link" couplers for better maneuverability and increased convenience on overhanging loads. Decks and superstructures are



custom-made to meet user's requirements. Two styles of casters are available. One is a type recommended for heavy service under normal conditions and the other is for extra-heavy

high speed service, it is reported. Iron, cast steel, molded-on rubber or phenolic resin wheels with either Hyatt-type or tapered roller bearing are optional.

Circle No. 174 on Reader Service Card for more information

## Leveling Device—Service Caster & Truck Corp.

Improvements in the Leveler, a leveling device designed for plant or warehouse use, have been announced by the Service Caster & Truck Corp. A centrifugal governor

Circle No. 92 on Reader Service Card for more information

## LIFT-MOVE-PROCESS



### with GRIPPER Woven Wire Slings

**LIFT** light tubing or heavy, bulky machinery faster, easier, safer with non-tangling, non-kinking Gripper slings. Broad flat body (NOT a single strand or series of links) means greater bearing surface, assures load stability.

**MOVE** vertically or horizontally without fear of sudden breaks. Gripper slings will not snap. Sharp edged loads will not cut sling body. Handle semi-polished stock without scratching, tube stock without crushing.

**PROCESS** through pickling tanks without harm to sling. All-metal construction impervious to corrosion or moisture.

**SEE YOUR JOBBER TODAY.** Gripper slings are sold through mill, supply, materials handling and safety equipment houses. **WRITE** for free literature.



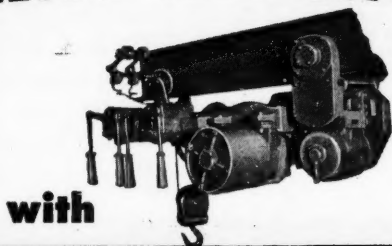
**The Cambridge Wire Cloth Co.**

WIRE CLOTH	METAL CONVEYOR BELTS	SPECIAL METAL FABRICATIONS
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Department W  
Cambridge 8, Md.

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

## STRETCH MANPOWER



with  
**ELECTROLIFT**

### worm drive hoist

Just one man can lift and move those heavy loads around your plant, with ElectroLift.

Safe, compact, smooth, quiet, fast... with a choice of many models for any use. Capacities up to 6 tons. Optional pushbutton control gives pin-point accuracy.

For further features, consult your ElectroLift representative in telephone directory.

**ELECTROLIFT**

ELECTROLIFT, INC., 30 CHURCH ST., NEW YORK 7, N. Y.

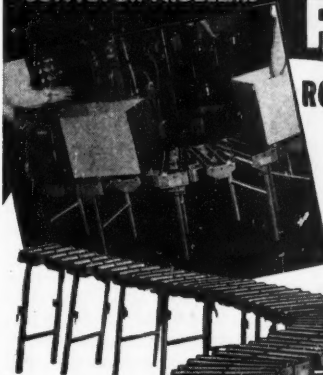
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FLOW • AUGUST, 1952

## HERE'S THE ANSWER TO THOSE EVER CHANGING CONVEYOR PROBLEMS

**FLEX-CO**

**ROLLER CONVEYORS**

- ★ Portable
- ★ Flexible
- ★ Adjustable



Extend your conveyor lines where never before possible, to your truck platforms, shipping rooms, warehouses, loading ramps, etc. . . as your ever-changing conveyor problems require new conveyor setups.

To  
TRUCK PLATFORMS,  
SHIPPING ROOMS,  
WAREHOUSES . . .  
LOADING RAMPS,  
ETC. . .

FLEX-CO Roller Conveyors are demountable to 8 inch sections, so that they can easily be carried from one location to another,

and added to as needed. Corners, posts, obstructions, etc. are no longer a problem in keeping your production lines operating, because you simply convey around them with FLEX-CO Portable, Adjustable, Flexible, Roller Conveyors . . . that are designed for those every day changing conveyor problems

FOR  
FULL  
DETAILS

SINCE  
1909

**BERLIN CHAPMAN CO.**

**BERLIN, WIS.**

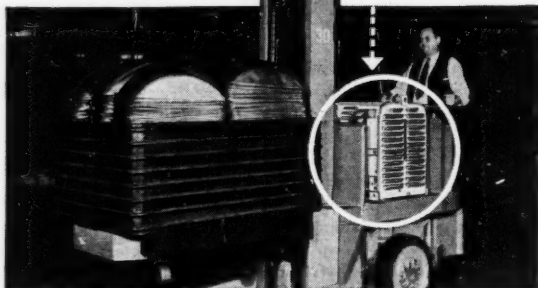
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Circle No. 93 on Reader Service Card for more information

**"My Choice?  
READY-POWER DRIVE  
...Every Time!"**

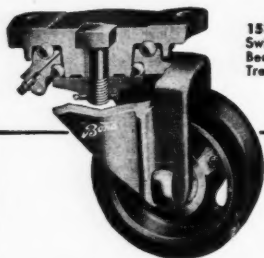
Ready-Power Drive is full electric drive featuring simple handling and full control, but with no limit to the hours of operation at peak efficiency. No wonder operators on incentive jobs prefer Ready-Power equipped trucks...they get more work done with less effort!



Remember . . . Your Truck Is No Better Than Its Power!

**The READY-POWER Co.**

3638 Grand River Ave., Detroit 8, Michigan  
Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks



1536A Series—Double Ball Race Swivel Caster equipped with Roller Bearing Vulcanized-on Soft Rubber Tread Wheels.

**Bond®**  
built-for-the-job  
**CASTERS**  
insure

- Increased plant efficiency
- Faster materials handling
- Lower production costs



1A Series—Stationary Caster equipped with Plain Bearing Semi-Steel Wheel.

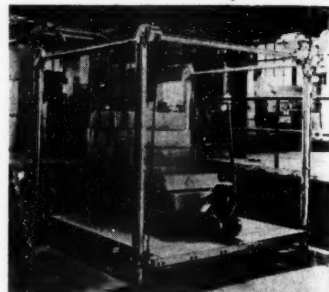
**SELECT** any of the more than 25 different types of Bond industrial casters for your materials handling jobs and *know* that these efficient, sturdy and economical casters will roll-up greater production profits every time.

For the complete facts on all Bond Truck Casters write for your copy of Catalog K-38.

**BOND FOUNDRY & MACHINE CO.**  
Manheim, Penna.

Circle No. 94 on Reader Service Card for more information  
120

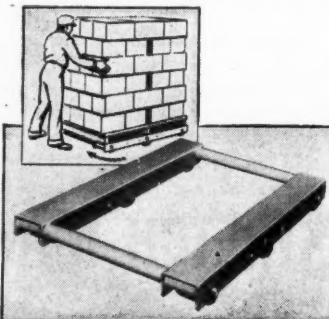
which acts as an emergency brake has been added to the device. In addition, according to the manufacturer, top and bottom automatic stops have been made more positive. It is reported that with a Leveler, material can be moved through a plant having different floor levels or loaded onto trucks or boxcars without removing it from the original carrier. Loads up to 6000 lb. can be raised five ft. in 50 seconds with the leveling device. Power is by a fully enclosed one horsepower electric motor of the intermittent type. Overall height is seven ft. ten in.



Circle No. 175 on Reader Service Card for more information

#### Maneuverable Pallet Dolly—Samuel Olson Mfg. Co.

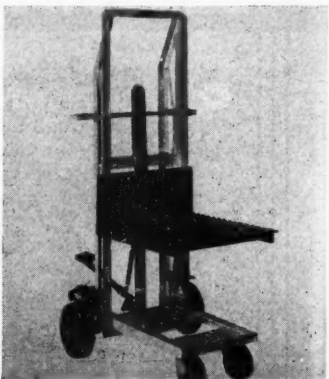
Flexibility for moving loaded pallets in close quarters is claimed for pallet dolly recently introduced by the Samuel Olson Mfg. Co., Each side of the dolly has a large roller in the center and smaller rollers at each end. When the load is evenly distributed on the dolly, the weight is practically balanced on the large center rollers, the end rollers merely serving as stabilizers. Weight of the dolly is 40 lb., and maximum load it can carry is one ton. Frame sizes range from 30 in. long by 24 in. wide to 48 in. square.



Circle No. 176 on Reader Service Card for more information

#### Hydraulic Lift—Big Joe Mfg. Co.

To ease the movement of heavy loads over rough, uneven floors and other surfaces, Big Joe Mfg. Co. has designed a hydraulic lift with six-in. swivel casters. Loads up to 750 lb. are raised or lowered by foot operation of the pedal shown in the illustration. The manufacturer reports that the lift has 10-in. solid rubber rear wheels and positive locking safety brakes. This is one of eight models of Big Joes available for a variety of uses.



Circle No. 177 on Reader Service Card for more information



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FLOW

### Light Weight Fiber Pallets—Fiber-Weld Corp.

This light weight expendable fibre pallet is manufactured by Fiber-Weld Corp. It is claimed that a 48" x 48" single faced pallet weighs approximately 8½ lb. Although it was primarily designed to be expendable, tests have indicated that many additional trips can be made. It is



constructed of honeycomb material, faced on either side with heavy kraft. The legs, nine per pallet made of the same honeycomb material are 8" x 8" square, with a crushing

strength of 60 lb. per sq. in. Pallets are available single faced, single faced with reinforcements on the bottom and double faced, in all standard sizes. Special size pallets can be had on request.

Circle No. 178 on Reader Service Card for more information

### Portable Stock and Feeder Cart—Jarke Mfg. Co.

A stock and feeder cart, the Steelmobil, made by Jarke Mfg. Co., is said to greatly speed up handling, transportation and feeding of steel sheet and bar stock to punch presses, etc. The cart has a working top of 10 gauge steel, flanged on all sides to promote rigidity and eliminate

### Moving or Storing is Rapid, Convenient and Inexpensive with IRONBOUND SEMI-LIVE SKID PLATFORMS



Ruggedly built with capacities up to 2500 lbs. These units are quickly made mobile with the use of low cost lift jacks . . . One of the methods that Ironbound engineers use to increase production and conserve space at low cost.



#### SEMI-LIVE SKID WITH BOX TOP

. . . permanently attached or removable. Also available with many other superstructures to "Short-Haul" your products thru production or into storage. Useful in hundreds of spots in every plant.

#### THE IRONBOUND "SAFETY-SKID" WITH ROUND CORNERS

Ironbound construction assures long hard use with complete safety to product and operator. Still the time proven method for handling of materials efficiently and economically.



### IRONBOUND

BOX & LUMBER COMPANY  
Materials Handling Division  
30 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

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Circle No. 97 on Reader Service Card for more information

## Lower the Boom ....or raise it!

### BUSCHMAN TROJAN

with one man  
"finger" control



"Safety balanced" boom makes this possible. Yes, and one man can quickly move the TROJAN on the easy-rolling, anti-friction-bearing wheels. Use this all-purpose powered conveyor for loading, unloading, stacking or boosting. Operates in both directions and it performs faithfully under all conditions, year in and year out.

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Ask for Bulletin 50-A

The E. W. BUSCHMAN Co.

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CINCINNATI 32, OHIO



NOW YOU CAN

## RENT ELECTRIC Fork Lift Trucks

Streamline **your** material handling operations by using late model, efficient, versatile ELECTRIC fork lift trucks at **LOW COST RENTALS!** You no longer must make a **HIGH CAPITAL INVESTMENT** to use these modern lift trucks. See how much **YOU CAN SAVE** through an L & C Electric Fork Lift Truck rental plan!

as  
low  
as **\$150** per  
month

For 1-ton Electric Lift Truck on 3-mo. rental

ALSO,

2-ton Electric lift truck, \$200 per mo. on 3-mo. rental

3-ton Electric lift truck, \$250 per mo. on 3-mo. rental

**BATTERY INCLUDED IN RENTAL**

For further information,

**CALL, WRITE or WIRE TODAY!**

**L & C MACHINERY  
CORPORATION**

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## REDUCE BULK STORAGE LABOR AND EXPENSE...

with

### SAUERMAN POWER SCRAPERS

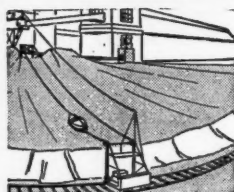
Stockpiling raw or processed materials, crushed ores, stone, clay, chemicals, salt, sugar, fertilizers, coal, etc.—indoors or outside—it's all the same to the versatile Sauerman Power Drag Scraper. And just one easily-trained man can do your particular job quickly, efficiently—at considerable savings to you!

Sauerman Scraper equipment is mechanically simple, seldom needs repairs, is reasonable in cost.

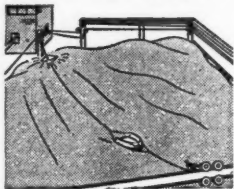
Write for free, illustrated catalog on bulk handling methods.

**SAUERMAN BROS. Inc.**

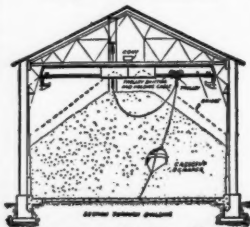
540 S. Clinton St.,  
Chicago 7, Ill.



100-ft. Radius Scraper



Scraper with Monorail



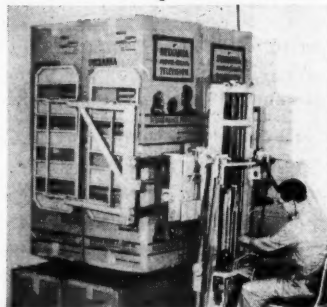
Scraper in Storage Shed

sharp edges. Frame is of tubular welded construction with pedestals of steel plate. It has swivel-type steel casters. Adjustable in height from 32 in. to 42 in., and is inclinable to a maximum of 5° to suit various press heights and angles and to insure accurate feeding.

Circle No. 179 on Reader Service Card for more information

### Carton Clamp—Yale & Towne Mfg. Co.

This carton clamp for handling of a wide variety of different size cartons is available from the Yale & Towne Mfg. Co., Philadelphia Division. Clamp arms are articulated to equalize pressure on the cartons being lifted. An adjustable regulator on the hydraulic system permits clamping pressure adjustments over a wide range, as determined by the weight of the cartons being handled, it is claimed. This regulator is also designed to prevent crushing of the cartons by limiting clamping pressure.



Circle No. 180 on Reader Service Card for more information

## TRAFFIC NEVER STOPS



when you repair your  
floors with **PERMAMIX**

Easy to apply—sets instantly—long wearing for year around use indoors or out—WILL NOT FREEZE—can be stored indefinitely and used in any temperature—lowers maintenance costs amazingly.

Here's all you do: Clean hole in any type floor, spread primer supplied in drum, fill in with PERMAMIX, tamp and dust with cement or floor dust, resume traffic immediately. It's that easy, for PERMAMIX feather edges and no cutting or chipping is required. No skilled labor is necessary, you need no special equipment, you have no mixing, waiting or production delays when you repair or patch your floors the easy, fast PERMAMIX way. Comes in handy, durable 50 lb. net weight drums.



### NOW AVAILABLE!

The new PERMAMIX-C for patching in low temperatures from 5° above zero to -30° below.

## PERMA Mix

Write or call for  
full details.

**PERMAMIX CORPORATION**

226 N. La Salle St.

Cent. 6-1785

Chicago 1, Illinois

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## Now! Hydraulic Powered Battery Operated BIG JOE LIFTS!

HOIST loads of as much as 800 pounds as high as 78 inches with effortless finger tip control.

CURRENT available anywhere from battery and built-in charger.

MOVE loads easily through narrow aisles, around sharp corners.

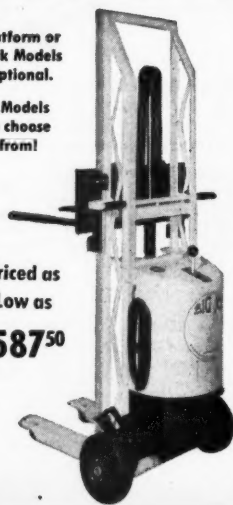
REDUCE time, effort and expense of materials handling in big or small plants.

Platform or Fork Models Optional.

9 Models to choose from!

Priced as Low as

**\$587<sup>50</sup>**



Write for Specifications or Demonstrations.

**BIG JOE MANUFACTURING COMPANY**  
184 N. FRANKLIN ST., CHICAGO 6, ILLINOIS

Circle No. 100 on Reader Service Card for more information

AUGUST, 1952 • FLOW

### Partitioned Pallet—Hammerslag Equipment Co.

The Heco Partitioned Pallet and Spacer is a development designed to remove weight of a stacked load from the tiered merchandise. Two plywood panels are slotted centrally half way down to permit them to be inter-locked and assembled in right angle relation to each other. For different size and shape merchandise, pallets may be



divided into as many partitions as necessary. Height of the partitions can also be varied to suit products. In stacking, weight is taken up by the plywood spacers. When not in use, spacers

can be disassembled and stored flat on top of pallets. Hammerslag Equipment Co.

Circle No. 181 on Reader Service Card for more information

### Between Machine Conveyor—Metzgar Co.

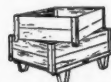
In many installations, where space is limited and where production is continuous, the Press-Helper of Metzgar Co. might be just the thing. The conveying device uses many standard parts, but is built to order for each specific job to convey parts or waste from machine operations.

Circle No. 102 on Reader Service Card for more information

### FOUR WAY ENTRY STEEL BOUND SKID BOXES



ROLLAWAY SKIDS



SECTIONAL BINS



SKID

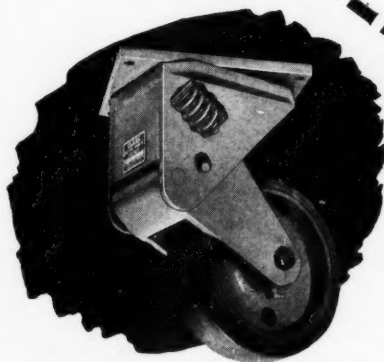
**STORE LOOSE ITEMS EFFICIENTLY  
SAVING FLOOR SPACE BY  
UTILIZING AIR SPACE**

Available plain or with corner tiering pockets for stacking three or four units high. Rugged arc-welded under-frames. Corner angle rounded for safety.

THE LANHAM COMPANY, 1401 S. 12TH STREET, LOUISVILLE, KY.

**LANHAM**  
FOR LIFETIME

## Clark DUOFLEX KNEE ACTION CASTERS HIGH DEFLECTION WITHOUT BOUNCING



**SAVES**  
LOADS - TRUCKS  
TIRES - FLOORS



- DAMPING PROPORTIONAL TO LOAD AND SHOCKS
- FULLY ENCLOSED SPRINGS
- ONE PIECE KNEE ACTION

- LIFETIME LUBRICATION OF KNEE ACTION
- FABRICATED CONSTRUCTION
- MECHANICAL ACTION STOPS

THIS NEW KNEE ACTION DESIGN IS SHOCK ABSORBING AS WELL AS SHOCK PROTECTING. MAINTAINS WHEEL TO FLOOR CONTACT—PREVENTS "FISH-TAILING".



**ALL STEEL WELDED TRUCK CO.**  
ROCKFORD, ILLINOIS

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## heavy stuff becomes light-weight aggregate

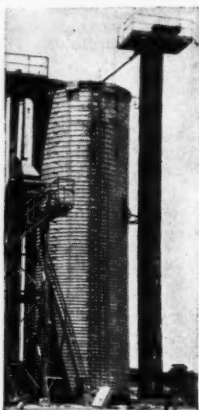
You can tell by the close spacing of the hoops on this 16 x 50 ft. Neff & Fry Silo that the material stored is very heavy. The silo, when filled, holds 450 tons of perlite, the raw material for Permalite—a light-weight aggregate made by The Great Lakes Carbon Co.

Our folder, "Bins With the Strength of Pillars," explains how Neff & Fry Super-Concrete Staves are made to give them rocklike density and extreme crushing strength.

If you handle any flowable bulk material, it will pay you to read our folder. Ask for a copy now while you're thinking of it.

**THE NEFF & FRY COMPANY**  
110 Elm St., Camden, Ohio

**NEFF & FRY** ▶ SUPER-CONCRETE STAVE STORAGE BINS



One model has a 6' x 12" R. T. belt without cleats operating over standard six in. drum pulleys with adjustable tension. Receiving and discharge heights are adjustable from 14 in. to 60 in. in this model which is mounted on a portable base. According to the manufacturer, other standard lengths and widths are available and belt can be furnished with or without cleats.

Circle No. 182 on Reader Service Card for more information

### Electric Lift—Revolvator Co.

This electric lift made by Revolvator Co. is said to use the same type of ram and double roller chain lift employed in high lift fork trucks. According to the manufacturer, states which ordinarily require special safety devices on lifts waive this requirement on double chain hydraulic units. Capacity of this unit is reported to be 1000 lb., and lift is 62 in. It is available with either 110 volt AC motor to operate from a lighting current, or a six volt motor which will operate from an automobile storage battery. The battery model incorporates a charger for battery maintenance.



Circle No. 183 on Reader Service Card for more information

Case Trucks

Freight Trucks

Rack Trucks

Industrial Trailers

Steel Frame Trucks

Drum Trucks

Dollies

Shelf Trucks

Box Trucks

Balance Type Floor Trucks

Dump Trucks

Wagon Trucks

Barrel Drain Racks

Jak Tung Trucks

**THOMAS TRUCK & CASTER CO.**  
290 MISSISSIPPI RIVER  
KEOKUK, IOWA

**THOMAS**  
MAKES 1000 DIFFERENT TRUCKS  
Write FOR COMPLETE CATALOG  
AND PRICE LIST

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124

it takes **PULL**

**TO GET THIS JOB DONE**

... And the STAMPOO TUGGER's got it... instantly available at the flick of a finger. Designed to fit your own special pulling or lifting applications with either manual or pushbutton controls, the TUGGER is yours in a large range of models and capacities... at surprisingly low cost.

The TUGGER's single or three phase motor is electrically reversible, and is equipped with dual voltage, high-torque winding for extra heavy starting loads. Your choice of safe, fast-acting electric solenoid, mechanical, or centrifugal brake.

Find out about the TUGGER today. Write for complete descriptive bulletin.



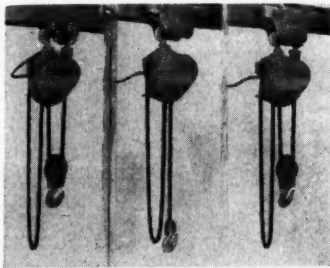
**ST. ANTHONY MACHINE PRODUCTS CO.**  
2426 East Franklin Ave., Minneapolis 6, Minn.

Circle No. 105 on Reader Service Card for more information  
AUGUST, 1952 • FLOW



### Hoist Conversion—Moffat Steel Co.

By use of the Moffat Hoist Conversion it is possible to convert a standard electric roller chain one-ton hoist to a



two ton unit in less than a minute, according to reports from the manufacturer. With this conversion, loads up to one ton are made at the full speed of the hoist, and loads over the one-ton capacity are lifted at half

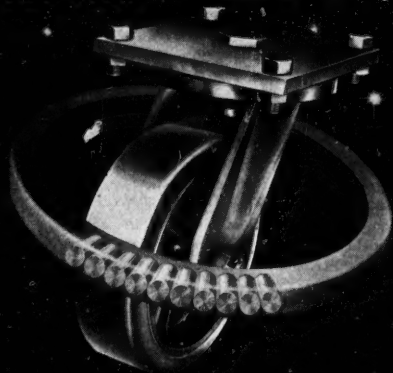
hoist speed. It is claimed that this unit will accommodate any standard one-ton roller chain hoist now on the market. It is furnished in two models. One is equipped with a trolley and lower block for mobile use on any track made of standard I beam. The other is for non-movement installation directly to beam consisting of beam clamps and lower block.

Circle No. 184 on Reader Service Card for more information

### Universal Connecting Links—Interstate Drop Forge Co.

The introduction of a universal design in Wedglock safety connecting links for carbon and alloy chain users

### UNIVERSALLY SENSATIONAL— The New "Loadmaster"!



For superior performance and durability, the new Midwest "Loadmaster" Trailer Caster is by far the most efficient and economical caster you can buy. The new Timken roller load bearing is a complete self-contained unit . . . can be replaced in a jiffy . . . permanently eliminates damage to raceways! Rollers are protected from dust and dirt. Grease retainer is an integral part of bearing. Features  $\frac{3}{4}$ " steel top plate,  $1\frac{1}{4}$ " King bolt and Timken Tapered thrust bearing. Wheels to suit. The new "Loadmaster" offers lower friction ratings plus ability to take abuse without breakdowns.

WRITE TODAY FOR COMPLETE INFORMATION

**MIDWEST PRECISION CORPORATION**

Hillsdale & Stock

Jackson, Michigan

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FLOW • AUGUST, 1952

### HINGED STEEL CONVEYOR BELTING

PRODUCTION  
MEMO

*This can  
solve our  
problem*



*For handling*

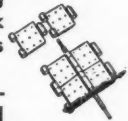
**STEEL SCRAP—STAMPINGS  
METAL PARTS—FLASH  
HOT FORGINGS—TURNINGS  
& CHIPS**

Assembled to your specifications from stock component parts, MAY-FRAN hinged-steel conveyor belting withstands maximum production punishment. Only MAY-FRAN hinged-steel belting will handle hot or highly abrasive metal parts, scrap, forgings, stampings, flash and turnings as well as wet or dry chips.



Precision formed heavy-gauge hinged steel links are assembled by means of high-carbon steel rods, and side chains become an integral part of belt. Outside links incorporate newly designed interlocking wings which remain positively engaged at all times, even when belting is traveling over sprockets. Link and rod construction eliminates fall-through.

MAY-FRAN hinged-steel conveyor belting can be furnished in practically any width or length to meet your requirements. It is available in  $2\frac{1}{2}$ , 4, 6, 9 and 12-inch pitch lengths with solid or perforated links.



Write today for catalog. ♦

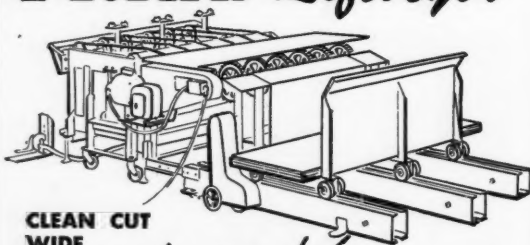
448-MF

**MAY-FRAN ENGINEERING, INC.**

1691 Clarkstone Rd., Cleveland 12, Ohio

Circle No. 107 on Reader Service Card for more information

# FRIED *Liftveyor\**



**CLEAN CUT  
WIDE**

**SHEARING to .005 inch!**

Efficiency goes up and costs go down when a FRIED LIFTVEYOR is teamed to your shear. This unique device provides sturdy "flex free" support of all sheet: Iron, Stainless Steel, Bronze, Aluminum . . . positions for cleaner cutting at closer tolerances . . . conveys sheared lengths beyond shear frame, without marring, to FRIED Stacker, shop truck or skid.

Ball point plungers that support sheet are pneumatically actuated by foot treadle synchronized with your shear. Sheared strip lowers to conveyor—plungers return for next support assignment.

*Shear FASTER, SAFER,  
MORE ECONOMICALLY  
with FRIED  
STRIP HANDLING EQUIPMENT*

## FRIED

*Stripveyor*

Patented

**AUTOMATICALLY PICKS UP AND CONVEYS  
STRIPS BEYOND SHEAR BED**

Get full capacity service out of your shear and get it *without risk . . . with less manpower*. Employ a FRIED STRIPVEYOR to pick up and carry strips beyond the shear bed automatically as fast as your shear can cut. Can pay for itself in as little as 100 working days!

As each section is sheared, it slides down an adjustable pick-up chute which butts against shear bed . . . As sections are delivered to table they slip back and are caught by toggles; then, are picked up by horizontal angles connected to endless link chains. Round steel fingers reach below table deck—pushing material in front of them. Material is raised to desired point, then dropped to a Stacker, shop truck or skid.

\* Patent Pending

Investigate the complete line of Fried Strip-Handling Equipment  
*Write for descriptive literature.*

## FRIED

STEEL EQUIPMENT MFG. CORP.

328 EAST 119TH ST., NEW YORK 35, N. Y.

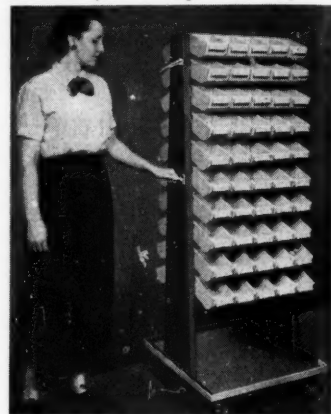
Circle No. 108 on Reader Service Card for more information  
126

has been announced by the Interstate Drop Forge Co. Only two sizes of the links are needed to connect any size chain from 1/4 in. to 3/4 in., it is claimed.

Circle No. 185 on Reader Service Card for more information

### Portable Stocking Unit—Service Parts Systems, Inc.

This portable stocking unit, mounted on four free rolling wheels is said to make it easy to transport small parts and materials from job to job, or hold in stockrooms without transferring material from containers to bins. Manufactured by Service Parts Systems, Inc., it is called the Porto unit number 5050-W. It has 100 individual containers arranged in 10 rows on each side of the bin. They are attached to support racks by a suspension system which makes it possible to lift them out quickly for stock rotation, according to the manufacturer. Unit is 62 1/2 in. high, 21 3/8 in. wide and 21 1/8 in. deep.



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Save time! Prevent accidents!

## LIFT AND DUMP

MECHANICALLY

**BAGS  
BARRELS  
DRUMS  
BOXES**

**REDUCE HANDLING COSTS** with a Cesco Dumper. It handles up to 100 loads per hour; has a lifting cap. ranging from 100 to 1500 lbs. Both single- and multi-purpose portable models are built in standard dumping heights from 5 to 12 ft. Stationary models up to 16 ft. dumping heights. Push button controlled. Write for catalog.

**ESSEX CONVEYOR, INC.**

101 Colden Street • Newark, New Jersey

**COLSON EQUIPMENT & SUPPLY CO.**

1317 Willow Street • Los Angeles 13, California



**WRITE  
FOR  
CATALOG**

## CESCO SKIP HOIST DUMPER

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AUGUST, 1952 • FLOW

### Air Vibration Table—Cleveland Vibrator Co.

When packaging small parts and granular materials, settling concrete molds, filling containers with semi-thick liquids, drawing cores in foundry practice, handling candy bar products, joggling paper, fatigue testing or any operations where platform vibration is required, this air vibration table of Cleveland Vibrator Co. might prove valuable. Intensity of vibration can be varied by a pressure control regulator, permitting operation at 20 to 100 psi line pressure. The vibrator, fastened under the table, is controlled by a knee valve. Table top is 12" x



18" x 11½". It floats on heavy steel springs and is 36" from the floor. Standard equipment includes air line filter, automatic lubricator, pressure control regulator and gauge. Other models for other vibrating purposes are available on special order.

Circle No. 187 on Reader Service Card for more information

## 7th annual INDUSTRIAL PACKAGING and MATERIALS HANDLING EXPOSITION

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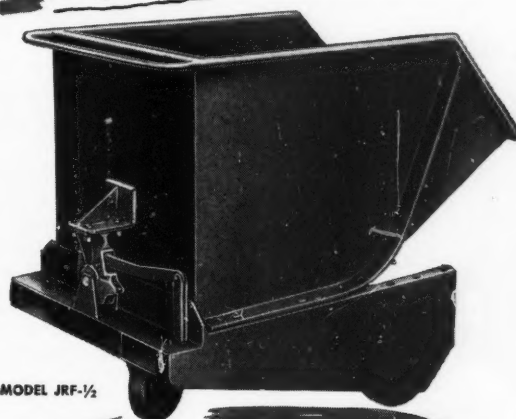
**SOCIETY OF INDUSTRIAL PACKAGING  
and MATERIALS HANDLING ENGINEERS**

Room 902-I • 20 W. Jackson Blvd. • Chicago, Ill.

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**FLOW** • AUGUST, 1952

# Ideal

FOR PUSHING BY HAND...  
OR FORK LIFT TRUCK USE



MODEL JRF-½

Phillips  
**PHIL-DUMP**  
Junior

Correctly sized for speed and convenience when being transported by hand . . . the Phil-Dump Junior is sturdily built to withstand rough service when being handled by fork lift trucks. With its capacity of one-half cubic yard, this valuable materials handler features a self-dumping hopper . . . which returns and locks in the loading position after it has been emptied.

For outstanding economy through years of service the Phil-Dump Junior is ruggedly made of an all-welded, steel construction. The rear wheel is castored for ease in maneuvering; hard rubber tires prevent damage to plant floors.

Write for Bulletin E-1A



### VERSATILE IN SERVICE

Without danger of tumbling the hopper, the Phil-Dump Junior can be emptied while still on the fork lift truck.

MANUFACTURERS  
SINCE 1863

**PHILLIPS**  
MINE AND MILL SUPPLY COMPANY

PITTSBURGH,  
PA.

**MATERIALS HANDLING EQUIPMENT**

2300 JANE STREET • PITTSBURGH 3, PA.

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## ALL MOTIONS MOTORIZED To Reduce Costs



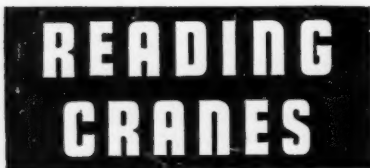
• Keeping this guide machine fed with steel strip was always a "touch and go" proposition requiring the attention of several men. To reduce handling costs and speed output, a new idea was tried: a one-ton, single I-Beam Reading Electric Crane, with all motions motorized, was custom-built for the job. Now the entire operation is under the thumb of one man—all he does is push the right button on the control pendant.

Modern materials handling is working wonders in reducing production costs these days. Chances are, a Reading Engineer can suggest ways to do the same in your plant if you give him the opportunity to personally analyze your operations. Simply drop us a line—there's no obligation.



READING CRANE & HOIST CORPORATION  
2108 ADAMS ST., READING, PA.

CHAIN HOISTS • ELECTRIC HOISTS  
OVERHEAD TRAVELING CRANES



Circle No. 112 on Reader Service Card  
128

## New Slants On Scrap Handling . . .

(Continued from page 79)

needed, making it possible to reduce number of carloads from the present one-per-day, to about one every other day, or less.

2. Fewer trips would be required each day to haul material to the gondolas, and faster hauling would save much time.

3. Scattering would be completely eliminated since there would be no loose material.

4. All types of refuse could be pressed in the baler, eliminating the expensive separation which was a drawback to incineration.

Another proposed solution involved a system utilizing water-tight containers with covers. The containers would be placed wherever refuse is collected, and loaded directly. For easy positioning, they could be mounted on wheels. They would be fitted with channels for fork truck handling, trucks would pick up the containers at the point of loading, and carry them directly to the gondola for emptying.

To eliminate scattering, the material might be pounded down, (probably with a weight on a crane) after being loaded in gondolas. There is a danger here, however, of compressing the material to a point where it becomes too solid for easy unloading. The proper amount of pressure would keep the refuse in the car but would not make it hard to unload.

Another suggested method for eliminating scattering involved the application of an asphalt-base spray over the loaded gondolas.

In general, the conference delegates believed this problem could be solved conclusively, only after more data was presented for analysis. It was observed that the capital investment in the present system is low. On the other hand, labor costs are probably excessively high. A higher capital investment, a fork truck for instance, might cut the labor cost considerably. It appeared probable that the truck would lower costs enough to justify initial cost.

Have You  
Seen Page 46?

Circle No. 114 on Reader Service Card

## BIG BARGAIN

on rebuilt, guaranteed

## HYSTER "20" LIFT TRUCKS!

6, 7 1/2, 9, or 12 foot lift trucks. 60-day guarantee. Only 18 Hysters available. Only \$1475.00 each, FOB Louisville. That's 47% less than new Hysters. Act now!



WIRE, PHONE ATWOOD 5821 or WRITE

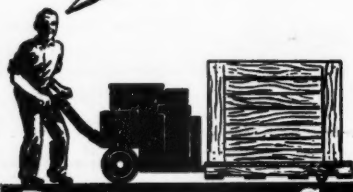


FREE!

Revolvator's new Truck

Index helps you pick size, capacity and type to suit your needs.

Send coupon today.



REVOLVATOR CO.

REVOLVATOR CO.  
8837 Tennele Ave., North Bergen, N. J.

Gentlemen:  
We want to know, without obligation, all about Revolvator Go-Getter Pallet Type Lifttrucks.

Name \_\_\_\_\_  
Position \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_

Circle No. 113 on Reader Service Card  
AUGUST, 1952 • FLOW



### This is Problem No. 5:

*How can returnable paint and oil containers be handled economically?* (Presented by J. A. Wall, Special Assignments, Production, Caterpillar Tractor Co.)

It was the consensus that the major problem is one of controlling container use in the plant. In some instances containers are rendered unusable by workmen who use them for storing liquids, spoiling them for the original use. In other cases, the containers are ruined by converting them to rubbish receptacles. Unless care is taken to preserve such containers there may be a considerable loss where they are billed to the user.

A question was raised concerning current practices in palletizing and the use of returnable vs. disposable containers.

It was mentioned that at one firm they prefer disposable containers which can be burned after using. This firm has standard steel containers for use in the plant and makes it a practice to transfer all material to the proper steel container upon receipt of the shipment and before it is transported to the plant area.

The practice of a large automotive manufacturer is to make the vendor completely responsible for the method of shipping and type of container employed. Parts thus shipped are then transferred to steel containers owned by the manufacturer. Essentially, this form makes the vendor responsible for the return of returnable pallets and containers, if they are used by the vendor. When the vendor is given a free choice as to the method of shipment, he can be more readily held responsible for damage and loss in shipment. However, even in this instance, the manufacturer accepts returnable type shipping containers and pallets only from vendors in the local area where the exchange can be made conveniently by the shipper. Use of an even exchange system may eliminate considerable book-keeping.

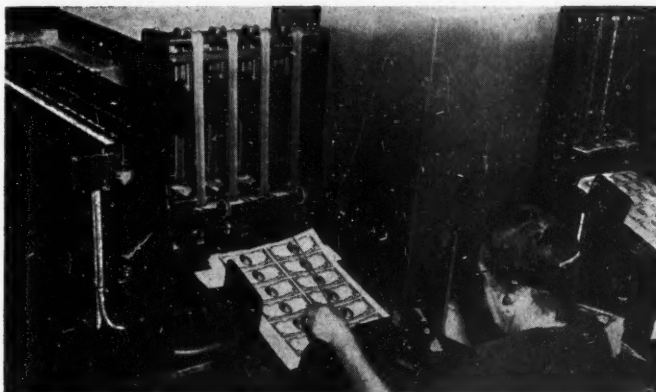
Discussion then led to the interesting fact that the philosophy of shipping has changed radically in the past few years. For example, only a few years ago most large manufacturers insisted upon palletizing most, if not all, shipments.

Today many companies, including

## Tape For "Hot Money"

America's newly-printed paper money is assured safe passage through a 360° F. drying-out operation at the Bureau of Engraving, by use of coated fibrous glass tape. Tapes formerly used in this operation lasted an average of ten days, occasionally catching fire, causing the currency to ignite. The new tapes have now performed successfully in excess of five months, thereby insuring a steady output of greenbacks day in and day out.

*Courtesy Owens-Corning Fibreglas Corp.*



## MINIMIZE YOUR "UPS" AND "DOWNS"

Those moves of material "up" — "down" — "in" — "out" — "across" and "back" can't be avoided — but their cost can be minimized.

It's largely a matter of proper selection of cranes, hoists, etc., as to type, construction, cost of operation, freedom from repairs, etc.

We've built these types of

equipment for several decades but we are regarded by our customers as material handling "consultants." We'll welcome an opportunity to discuss your problems. Doubtless there's a Euclid crane or hoist to handle the situation in an ideal manner.

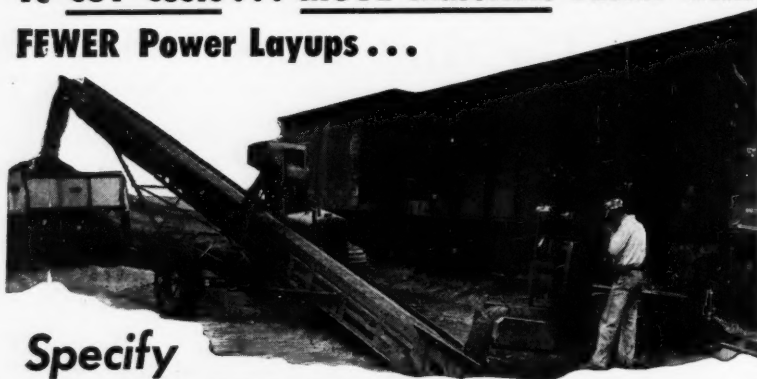
CATALOGS  
ON  
REQUEST

**THE EUCLID CRANE & HOIST COMPANY**  
1362 CHARDON ROAD, EUCLID, OHIO



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## To **CUT Costs...** **MOVE Materials Faster with** **FEWER Power Layups...**



### Specify **WISCONSIN-Powered Equipment**

Tons of materials move quickly from hopper cars to trucks with these two Farquhar conveyors hard at work, as one operator stands by. Both conveyors are powered by Wisconsin Heavy-Duty Air-Cooled Engines.

Maximum service with a minimum of servicing is not a short-lived Wisconsin Engine advantage... a fact thousands of economy-minded manufacturers recognize. Such features as heavy-duty construction throughout, tapered roller bearings at both ends of the crankshaft, fool-proof air-cooling in summer sun or winter blasts, and an easily-serviced OUTSIDE magneto with impulse coupling for fast all-weather starts, are your assurance of dependable performance when dependability counts most. Wisconsin Engine-powered equipment runs, season after season, with minimum power layups... moving materials when and where you want to move them... at a big saving in time and manpower.

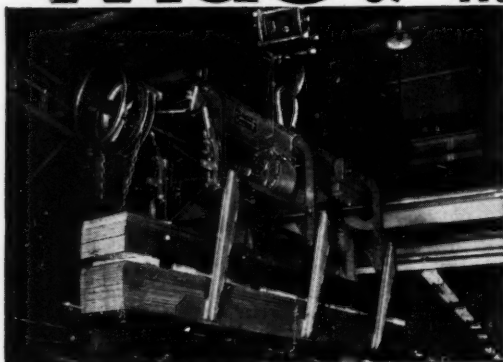
4-cycle single-cylinder, 2-cylinder, and V-type 4-cylinder models, 3 to 30 hp. Write for catalog.



### **WISCONSIN MOTOR CORPORATION**

World's Largest Builders of Heavy-Duty Air-Cooled Engines  
MILWAUKEE 46, WISCONSIN

## **Wide or Narrow...**



### **1 C-F LIFTER HANDLES THEM ALL**

Whether your production requires a few or many widths of sheet steel, 1 C-F Lifter, with its wide range of jaw and carrying angle adjustments will probably meet all your sheet handling requirements.

Adjustments are made by the operator in a few seconds, permitting the Lifter to shift from wide to narrow sizes, almost instantly.

Because it can pick up, carry and unload more loads per hour, using less man and crane time than any other method, a C-F Lifter will soon pay for itself.

Bulletin SL-28 gives you the complete story of C-F Lifter advantages to you. Ask for it today. There's no obligation.



### **CULLEN-FRIESTEDT CO.**

1320 South Kilbourn Avenue • Chicago 23, Illinois

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ones represented on the panel find it more economical to have rough parts—castings, forgings, stampings, and even finished parts of certain types loaded loose in freight cars or trucks. This practice has been made possible by the versatility of fork trucks and other industrial equipment fitted with scoops of special design.

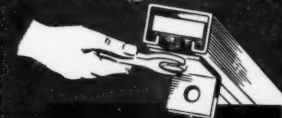
Upon receipt, the parts are unloaded by fork truck and then packed in unit loads or in standard shop containers.

Palletizing, however, is still employed for the shipment of finished parts and assemblies.

Another current practice, utilizing fork trucks of modern types, was outlined. This is in connection with the shipment of large parts and stampings without the use of pallets or containers. In this case, some firms stack the loads on special racks from which the loads are picked up by fork trucks, using special fixtures.

This method had limitations at the start due to the need for a variety of fixtures to handle different kinds of loads. The solution to this problem has been found in the design of quick-exchange fixtures for fork trucks, the exchange now being made from one

### **the FRAME WORK for an EFFICIENT Storage and Material Handling SYSTEM**



### **STORACK**

STEEL FRAMING DESIGNED FOR UNIVERSAL APPLICATION

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**WHERE, WHEN and HOW YOU  
WANT THEM! EASY, LOW COST  
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Division of A. F. ANDERSON IRON WORKS

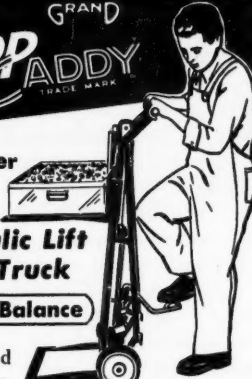
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AUGUST, 1952 • FLOW

**Shop Caddy**  
TRADE MARK

**The Faster Action**

**Hydraulic Lift Hand Truck**

**Perfect Balance**



The Grand Shop Caddy, industry's most useful hand truck, performs lifting and moving jobs often requiring 3 men. It is safe and easy to operate in confined areas—takes no more room than an ordinary hand truck. Either hand or foot lever hydraulic operation.

**There is a Shop Caddy Model for your particular needs.**

- Model 436 MF-SP Lifts 500 lbs. 36 inches in 30 seconds
- Model 454 TF-SP Lifts 500 lbs. 54 inches in 45 seconds

**Ask Your Grand Dealer**

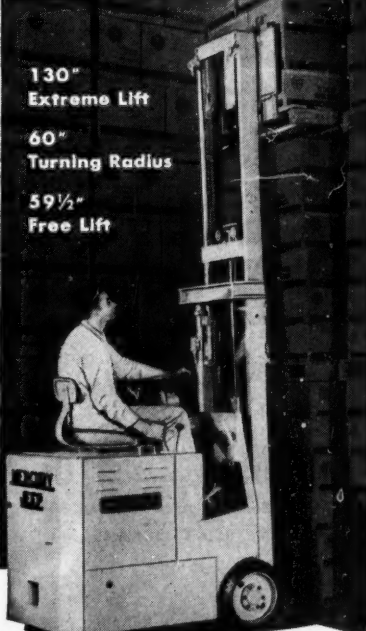
**For a Demonstration in Your Own Plant**  
Also see other Grand Materials Handling Equipment including Motor-Driven Lift Hand Trucks, Elevators, Portable Cranes, Automatic Pans and Barrel Dumpers.

**UNITED MANUFACTURING and SALES CO.**  
Materials Handling Division of Grand Specialties Co.  
201 NO. WELLS ST. • CHICAGO 6, ILL.

**130" Extreme Lift**

**60" Turning Radius**

**59 1/2" Free Lift**



**"JEEP" Model-230.**  
2000 lb. capacity

**Mercury**

Send for catalog on complete line of MERCURY trucks, tractors, trailers.

**MERCURY MANUFACTURING COMPANY**  
415+ S. Halsted St., Chicago 9, Illinois

Circle No. 120 on Reader Service Card  
**FLOW • AUGUST, 1952**

fixture to another in a matter of minutes.

Current practices as outlined by one of the delegates marks an important new phase of materials handling practice and is worthy of further consideration on the part of other large manufacturers where volume of shipments justifies the manufacture of a variety of fork truck fixtures. It also points up another phase of usefulness for the versatile fork truck equipment.

**This is Problem No. 6:**

(Presented by L. L. Poe, Supervisor Production Control, The Falk Corporation)

This company's job-shop operations revolve around the use of machine tools in the turret lathe and boring bar class. Metal chips and turnings resulting from these operations constitute the bulk of the scrap to be handled.

While there are various alloys involved, the total quantity to be handled is not sufficient to warrant segregation. Thus, the company's scrap handling problem resolves itself into only two phases: transferring the scrap from the point of generation to a central collecting point and, removal of scrap from the plant.

Under the present system, scrap accumulating over two 9-hour shifts is removed from the chip pans during off-hours or lull periods. The scrap metal is shoveled by hand into dumping containers and the containers transferred to an outdoor dumping pit.

The dumping pit contents are transferred to a gondola once a week, using a mobile crane equipped with an electric magnet. This weekly accumulation rarely exceeds one carload (approximately 30 tons).

The question presented to the conferees was, "What method can we employ to more effectively transfer the weekly accumulation of mixed scrap to a scrap dealer?"

**What would you do?**

**Here's what the experts suggested—**

One manufacturer suggested the use of drop-bottom or roll-over type hoppers to be manually loaded from the chip pans and transferred by fork truck to the gondola for direct loading. In addition, it was proposed that scrap

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**Tote Boxes**

**... Do Your Job**

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On Conveyors, Pallets, Hand Trucks, Skid Platforms, or what have you.



- Ruggedly constructed of high grade hardwood lumber
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- Self stacking
- Convenient hand holes for positive grip
- Binding rivets PLUS corner lock style yields maximum rigidity

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100-249	1.94	2.19	2.34
No. 1 size — (I.D.) — 14 1/2" x 11 3/4" x 9"			
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- Kraft Foods Co., over 100,000 sq. ft.
- Spiegels, Inc., over 100,000 sq. ft.



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State-Madison Bldg., over 300,000 sq. ft.

Merchandise Mart, over 75,000 sq. ft.

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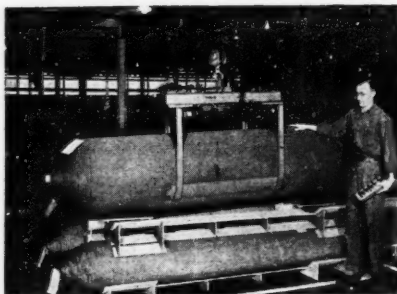
The CAMP COMPANY, INC. TRIANGLE 4-4770-1-2

## MANSAYER GRABS In "TEAM WORK"!



A prominent paper box manufacturer finds a Mansaver Grab doubles the usefulness of a fork truck because only the Mansaver enables high piling with safety and ease. This kind of "team work" really pays off! (See illustration at left.)

Unwieldy  
Rolls Of  
Broadloom  
Carpeting  
Are Moved  
From Delivery  
Docks  
To Stock,  
From Stock  
To Cutting  
Room, Then  
Back Again  
To Stock!



Also—a large department store has proved the saving and convenience of handling stock with a Mansaver Grab.

Write for **NEW Mansaver Catalog**

**MANSAYER INDUSTRIES, 3103 EAST ST., NEW HAVEN, CONN.**



be accumulated in the self-dumping containers during the first three days of each week. Actual loading operations would take place during the last two days of each week when the gondola car is demurrage-free.

This would eliminate the necessity of a dumping pit for a central collecting station. However, not only would additional equipment be required, but a sizeable storage area would have to be set aside to accommodate the three-day accumulation of loaded self-dumping hoppers.

The participants also mentioned that utilizing various attachments available for installation on standard fork trucks, scrap metal from the point of generation could be transferred to either a central collecting station or directly to the gondola.

It was the consensus that when daily scrap accumulation does not exceed 30 tons, daily removal is advisable. When the accumulated scrap is more than 30 tons, storage and periodic shipment by gondola is preferable.

Another suggestion involved the installation of a conveyor system to take chips and turnings from the machines

## PALLETS FOR EVERY NEED!

Whether you need a lightweight shipping pallet, or a heavy duty pallet, we can supply a RAZOR-BACK Pallet made to your specifications.

Get our present prices on quality pallets. Shipments will be made **WHEN PROMISED!**

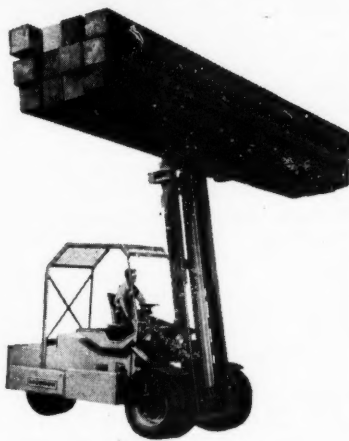
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PINE BLUFF, ARKANSAS





**THESE SILENT HOIST  
WORK HORSES ARE MADE  
TO SAVE UP TO 75% IN  
MATERIAL HANDLING COSTS  
AND TIME AS WELL**



**HEAVY-DUTY FORK  
LIFTRUK**  
**5-7½-10 TON CAPACITIES**

The heavy-duty "Silent Hoist" LIFTRUK and LIFT-O-KRANE feature fast handling of unbalanced and capacity loads, with maximum stability . . . high lifting range . . . short turns in narrow aisles create added acres to your storage space.

These SILENT HOIST features add up to faster inloading, most efficient inter-plant handling and scientific stacking, quicker out-loading to truck, trailer or car, with time and cost savings, very often up to 75%.



**LIFT-O-KRANE**  
Combination Boom Crane  
and Fork Lift, with separate  
power winch for Load Line.

SEND FOR BULLETIN 75 on  
LIFT-O-KRANE  
and BULLETIN  
77 on LIFTRUK.

Either machine  
can be supplied  
with RAM at-  
tachment.



**SILENT HOIST & CRANE CO.**  
Pioneers of Heavy Duty  
Materials Handling Equipment

888 63rd STREET BROOKLYN 20, N. Y.  
Circle No. 125 on Reader Service Card  
FLOW • AUGUST, 1952

to a local collection point. It was stated that more than 40 types of conveyors are available for as many different types of machines. One participant claimed that installations of this type eliminate downtime required for scrap removal, thereby increasing machine running time (and production) 15 to 20%.

When the quantity of scrap is such that accumulation is desirable, a central collecting point is dictated. The conference participants felt that the demountable truck body is the most effective type of collecting equipment. For this particular plant, it was decided that a 10 cu. yd. container would be sufficient.

Such equipment is the property of this plant's scrap dealer and represents a minimum investment on the part of the disposer. These containers may be located wherever there are suitable approaches prepared for the equipment accumulating scrap from the point of generation. The scrap dealer removes the filled containers and immediately substitutes an empty one. For the disposer, there remains only a selection of the most effective means of delivering scrap to the demountable truck body.

**Letters to the Editor**

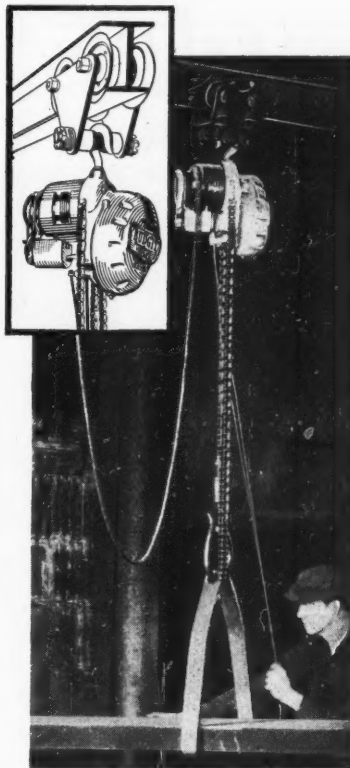
(Continued from page 10)

**To FLOW:**

We have a handling problem in connection with unloading carload shipments of mill wrapped steel pipe. Pipe received varies from ¾ in. inside diameter up to 12 in. diameter, and comes in either 20 ft. or 40 ft. (approximate) lengths. Chain or wire rope slings or chokes that bind the pipe may damage the wrapping on the pipe. We have been using a spreader beam about 20 ft. long and attaching Manila rope slings from each end. For the larger diameters of pipe we use wire rope with hooks on each end that hook into the inside of the pipe ends.

W. A. Petersen  
Iowa-Illinois Gas and Electric Co.

Last October, FLOW published an article entitled "26 Methods of Handling and Storing Steel." It contained several ideas which could be of value to Reader Petersen. A copy has been sent to him.



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An easy one-hand pull on the control cord and the smallest 'Budgit' Electric Hoist lifts a 250-lb. load one foot in less than two seconds. No time wasted. No injuries to men lifting heavy machine parts, tools, loads of all kinds. Production goes up, costs go down, workers stay fit.

Each 'Budgit' Hoist is a complete lifting unit in itself! No extras to buy, no installation expense. Just hang up, plug into the nearest electric socket, use! All capacities — 250 to 4,000 lbs. — cost but a few pennies a day to operate. Both A. C. and D. C. models. Prices start at \$119.

Learn why the 'Budgit' Electric Hoist is industry's favorite lifting unit in the production of defense and civilian goods. Write for a copy of Bulletin No. 391.

**'BUDGIT' CORD REELS**

Keep conductor cords of hoists, portable tools, mobile devices having motors up to and including 1 H. P. taut and up out of the way.



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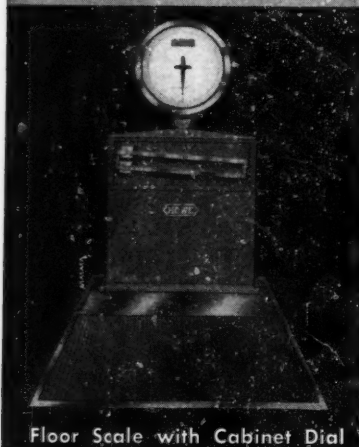
**ELECTRIC HOISTS**

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Builders of "Shaw-Box" Cranes, 'Budgit' and 'Load Lifter' Hoists and other lifting specialties. Makers of 'Ashcroft' Gauges, 'Hancock' Valves, 'Consolidated' Safety and Relief Valves, and 'American' Industrial Instruments.

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Floor Scale with Cabinet Dial



Modernize your beam scales  
with Howe 77 Weightographs

# HOWE Two and Four Wheel Hand Trucks



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Please send me:  
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HOWE 77 WEIGHTOGRAPH FOLDER ☐  
HOWE HAND TRUCK CATALOG NO. 15-B ☐

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

Circle No. 127 on Reader Service Card  
134

## Classified Advertisement Section

### USED EQUIPMENT — MEN — JOBS — LINES

Rates: for "Positions Wanted" \$8.00 minimum, limit 25 words. For all other classifications \$10.00 minimum for 25 words; each additional word 25c. Boldface type or all caps, \$12.00 minimum for 25 words, each additional word 35c. Box address counts as five words. All insertions payable in advance.

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##### WILL SACRIFICE "YARD BIRD" POWER SWEEPER

Cost \$975.00 new. Used less than 48 hours.  
Fits any fork truck. First offer of \$795.00  
f.o.b. our plant accepted. Reply Box 8152,  
Flow.

- 26 — 10 foot sections used 18" wide Alvey  
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- 1 — 18" wide 90 degree curve
- 12 — 8 foot sections used 30" wide gravity  
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Complete Hanak Trolley system, in  
good condition; installed new in 1927  
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Aggressive Pittsburgh distributor is  
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We have an opening for another As-  
sistant Manager in our Pallet Division.  
Qualifications required: Ability to read  
blueprints, to work pallet designs and  
cost and price calculations. Experience  
in the lumber trade important but not  
absolutely necessary.

SOUTHERN LUMBER & MFG. Co.  
Ellijay, Ga.

#### REPRESENTATIVE WANTED

Wanted — Full or part time, sales repre-  
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Shooks in any of the following areas:  
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New York (Excluding New York City),  
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Otto F. Fichte & Son, Inc., P. O. Box 4,  
Holts 23, N. Y.

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## THE ONLY MECHANICAL JACK WITHOUT SPRINGS

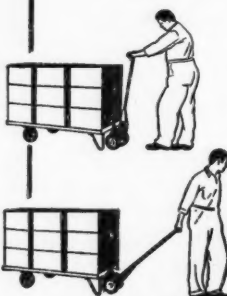
The Nutting Jack is the ONLY jack operated en-  
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skid system suddenly being put out of service.  
It's always dependable.

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TWELVE SEMI-LIVE SKIDS. That's one reason  
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such a money-saver in your plant. Material  
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hurry. The jack may be coupled to one skid,  
then uncoupled and coupled to another faster  
than the time it takes to tell about it.

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write for Bulletin 48-JS. It  
will pay you to get all  
the facts on this superior  
Nutting Jack-Skid handling  
system.

Nutting makes every-  
thing in floor trucks,  
wheels, casters.



#### NUTTING TRUCK AND CASTER COMPANY

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AUGUST, 1952 • FLOW

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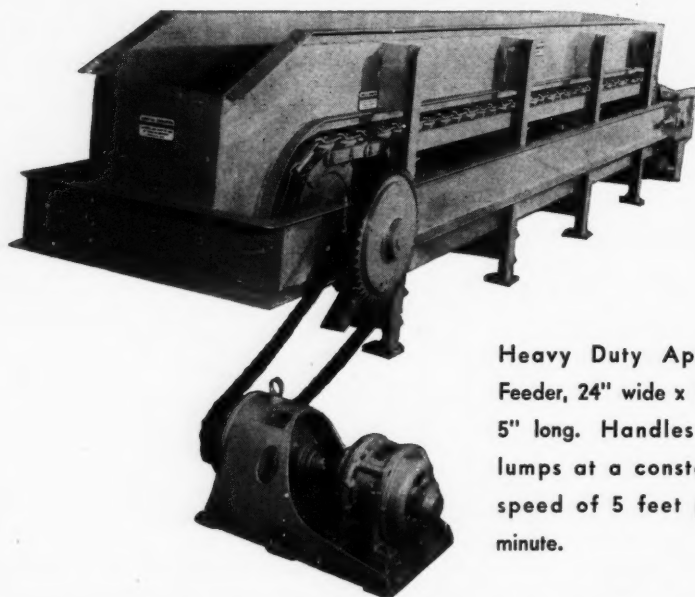
## "Coney Island" Belt Conveyor

A rubber conveyor belt system that looks like a Coney Island roller coaster but stretches more than two and one half miles over, around and under rugged mountains is helping in the development as an industrial area of the

Kanawha River Valley, near Charleston, W. Va. The conveyor is doing a job estimated as equal to a fleet of a dozen 15-ton trucks operating 20 hr per day.

The first flight of rubber belt, a 1200 ft. section picks up coal from a drift mine 500 ft. up on the side of a 1900 ft. mountain and carries it down the mountainside at a 17° angle for an overall drop of 296 ft. Then it threads its way across country for more than 4000 ft.; up the side of a second mountain in a series of roller coaster dips and rises, through a 4000 ft. tunnel under a third mountain; it emerges at the Kanawha river, near Montgomery, W. Va., 14,000 ft. from the start, where it discharges its load in river barges.

*Courtesy B. F. Goodrich Co.*



Heavy Duty Apron Feeder, 24" wide x 16'-5" long. Handles 8" lumps at a constant speed of 5 feet per minute.

Heavy Duty and Light Duty Overhead Trolley Conveyors • Slat Conveyors  
Chain Conveyors • Belt Conveyors • Gravity Conveyors.

# CONVEY-all CORPORATION

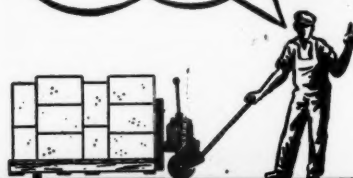
MANSFIELD, OHIO

DESIGNERS • ENGINEERS • MANUFACTURERS OF ALL TYPES OF CONVEYING EQUIPMENT  
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any lift trucks  
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Truck Index.

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Gentlemen:  
We want to know, without obligation, all about Revolvator Red Giant Lifttrucks.

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Position \_\_\_\_\_  
Company \_\_\_\_\_  
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# NO OTHER Power Lift Truck has ALL THESE FEATURES!

## ALL CONTROLS IN HANDLE HEAD

EVERY  
CONTROL IS IN THE PALM OF  
MY HAND. I HAVE MORE CONTROL  
— QUICKER APPLICATION — OF SPEED,  
DIRECTION, BRAKE, LIFTING AND  
LOWERING.

## TIMED ACCELERATION

ALL I DO IS  
PRESS THE  
HANDLE "TRIGGER"  
ALL THE WAY AND  
SPEED PICKS UP INSTANTLY AND  
SMOOTHLY WITH NO JERKS OR JOLTS.  
THE SPECIAL TIMING DEVICE ELIMINATES  
MY HAVING TO "SHIFT" THROUGH  
EACH SPEED.

## VERTICAL HANDLE OPERATION

WE SAVE  
6" TO 9" OF  
AISLE SPACE WITH THE JACKLIFT ELECTRIC  
TRUCK. HOW? SIMPLY BECAUSE ALL CONTROLS  
OPERATE WITH THE HANDLE IN THE  
VERTICAL POSITION. TRY IT . . .  
YOU'LL SEE HOW IMPORTANT  
THIS FEATURE IS.

## ELECTRIC DEADMAN TYPE BRAKES

I SIMPLY  
RELEASE MY HAND PRESSURE ON  
THE HANDLE "TRIGGER" AND GET  
INSTANT, CUSHIONED BRAKING.  
IT'S QUICKER AND SAFER . . . THE BRAKE  
OPERATES WITH HANDLE IN ANY  
POSITION.



CAPACITIES: 4000 and 6000 lbs.  
PALLET and PLATFORM TYPES

## the NEW LEWIS-SHEPARD JACKLIFT® ELECTRIC TRUCK

Since 1915

Sales-Service  
In Principal Cities  
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"Trucks, Industrial"  
In your  
Yellow Phone Book



The "MASTER" Line

The Most Complete  
Line is the  
Master Line

CHECK L-S FIRST

LEWIS-SHEPARD

34 Walnut St., Watertown 72, Mass.

Please send me additional information about the new  
JACKLIFT ELECTRIC TRUCK

Name \_\_\_\_\_

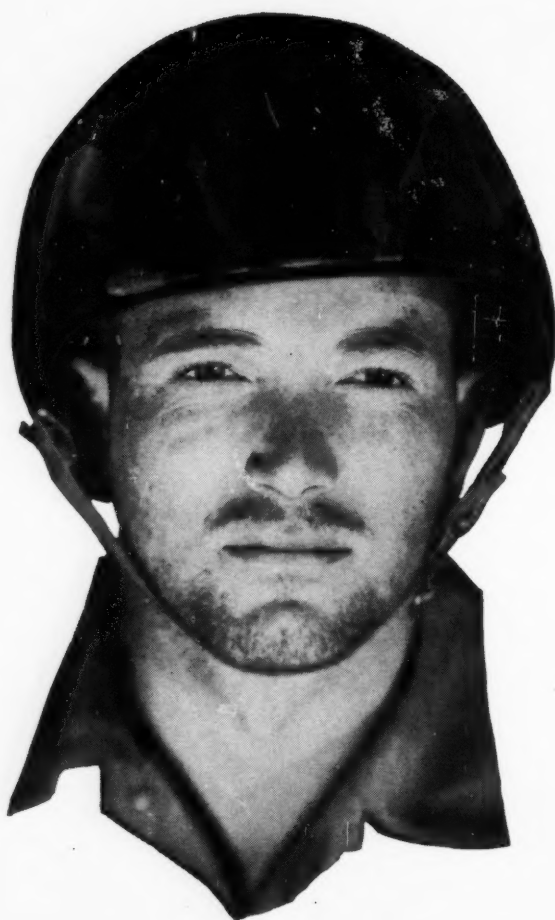
Company \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Circle No. 260 on Reader Service Card for more information

# First Lieutenant Henry A. Commiskey, USMC Medal of Honor



ONE SEPTEMBER DAY, near Yongsungp'o, Korea, Lieutenant Commiskey's platoon was assaulting a vital position called Hill 85. Suddenly it hit a field of fire from a Red machine gun. The important attack stopped cold. Alone, and armed with only a .45 calibre pistol, Lieutenant Commiskey jumped to his feet, rushed the gun. He dispatched its five-man crew, then reloaded, and cleaned out another foxhole. Inspired by his daring, his platoon cleared and captured the hill.



Lieutenant Commiskey says:

"After all, only a limited number of Americans need serve in uniform. But, thank God there are millions *more* who are proving their devotion in another vitally important way. *People like you*, whose successful *50-billion-dollar investment* in U.S. Defense Bonds helps make America so strong no Commie can crack us from within! *That counts plenty!*

"Our bullets alone can't keep you and your family peacefully secure. But our bullets—and *your Bonds—do!*"

★ ★ ★

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